

**Investigating the capability of UAV imagery for AI-assisted mapping of
Refugee Camps in East Africa**

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Abstract

Refugee camps and informal settlements provide accommodation to some of the most vulnerable populations, with many of them located in Sub-Saharan Africa. Many of these settlements lack up-to-date geoinformation that we take for granted in developed settlements. Having up-to-date maps on the dimension, spatial layout are important for assisting administration tasks such as crisis intervention, infrastructure development, and population estimates which encourage economic productivity. The data inequality between the developed and developing countries are results of multiple reasons ranging from a lack of commercial interest to knowledge gaps in data contributors. Such disparity can be reduced using assisted mapping technology. A combination of Very High Resolution satellite imagery and Machine Learning based methods that exploit the textural, spectral, and morphological characteristics of VHR imagery are commonly used to extract geospatial and imagery of these complex environments. Although many have shown promising results in satellite VHR scenarios (e.g. differentiating slum and non-slum), in drone imagery, however, results might suffer from noise caused by environment and drone-based specific motion problems. Recent advances in Deep Learning based Computer Vision, however, might be able to address these issues.

This study investigated the capabilities of applying Deep Learning semantic segmentation methods for delineating building footprints in refugee camps from open-data drone imagery. This study is connected to a larger initiative to open-source the AI assisted mapping platform in the current Humanitarian OpenStreetMap Team's ecosystem. The objective of this study is to test the U-Net and several variations of the architectures' performance for building footprint mapping, initially on the pixel-aligned and simple Kalobeyei dataset. Subsequently, the models were introduced to the less-aligned Dzaleka and Dzaleka North datasets of higher complexity. A comparison of the baseline experiments, which kept the settings of hyperparameters to be consistent, were conducted

between the architectures. Class-based accuracy assessments metrics were used to evaluate performances between the baseline experiments setup. This allows evaluation into which level of data quality is required to achieve acceptable classification results when scaling Deep Learning assisted mapping efforts in the context of humanitarian mapping.



This study demonstrated the ability to use Deep Learning semantic segmentation to perform building segmentation in complex humanitarian applications. Having increased access to open-data Very High Resolution drone imagery such as the OpenAerialMap initiative is an advantage to building AI-assisted humanitarian mapping. The study evaluated various U-Net based architectures and data input setup. Yet, the variation of the results not only emphasised the complexity of Deep Learning based methods, but also indicate that further efforts will be needed to focus on the selection of suitable network architectures as they show varying resilience towards imperfect reference samples.

0.1. FOREWORDS AND ACKNOWLEDGEMENTS

Forewords and Acknowledgements

Service to the less-advantaged! This is the value taught by my parents since I was small, and have since became the main motivator for the completion of this Masterarbeit. I have been extremely fortunate to have been able to carry out such an important work in partnership with the Humanitarian OpenStreetMap Team and the German Aerospace Center (DLR). This project came about as a hope to do something scientifically rigour, yet practically impactful. Through providing a technical, careful study, I, the supervisors, and partners hope that this work can provide direction and minimise future mishaps of the open-sourced AI-assisted mapping solution. Working on this project have been a journey of surprises, long nights, new friendships, and adventures, of which I gained bountiful from. Ultimately culminating into the work being accepted by the Proceedings of the Academic Track at State of the Map 2022 (*Chan et al., 2022*). All of this could not have been possible without the generous facilitation from Emran Alchikh Alnajar and the passionate yet pedantic Matthias Weigand who maintained high standards and scientific rigour while motivating me to focus on the light at the end of the tunnel. I would also like to thank my past classmates, colleagues, and lecturers, whom tolerated and kept patience with me at times of desparation and frustration. Lastly, I must extend my appreciation to my parents Lucia Leung and Savio Chan. Without their support, I would have never had the resources and opportunities to get to where I am now and complete this work.

0.2. DECLARATION OF INDEPENDENT WORK

Declaration of Independent Work

I confirm that all this work is my own except where indicated.

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Abbreviations

- SDG: Sustainable Development Goals
- HOT: Humanitarian OpenStreetMap Team
- CV: Computer Vision
- CNN: Convolutional Neural Network
- SGD: Stochastic Gradient Descent
- OCC: Open-Cities-AI-Challenge
- OA: Overall Accuracy
- IoU: Intersection-over-Union

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Introduction

The world's population is more urbanised than ever before. As of 2018, approximately 4 billion (55%) (UN DESA., 2018, Taubenöck et al., 2009) reside in urban areas, of which 60% reside in slums often located at the fringes of the city (Venables A., 2018). Urbanisation growth is expected to increase by 2.5 billions between 2018 to 2050, most of which will be in Asia and Africa (UN DESA., 2018). When population growth outpace development, informal settlemnt become the supplier of significant housing stocks. These informal settlements are dynamic and represent a good reflection of cultural practices, access to resources, financial limitations and other socio-economic conditions. This means the informal settlement differs significantly between urban and rural settlements from roof covers, densities, and are subjected to different levels of access to resources and the types of resources.

Refugee camps are often the common or only way for displaced people to receive shelters and assistance. They are often setup in place of proximity to displaced population, whether that be from natural disasters, human caused disasters, or other reasons. Throughout history, refugee sites have provided haven to the world's most vulnerable population (UN, 2018, Turner S., 2016, UNHCR, 2021). However as of 2020, out of the 26.4 million refugees, only around 1.4 million have access to third country solution between 2016 to 2021 (UNHCR, 2021). Additionally, although officially defined as temporary settlement, many refugee camps have had longer than expected life cycle, some of them have even became "Secondary Cities" and therefore suffers similar problems of

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poor governance and rapid urbanisation which consequentially makes them unattractive as investment (Cities Alliance & AfDB., 2022). For the many refugee camps and informal settlements that have lasted well beyond their expected temporary role, there are generally 3 ways of solving the issue: 1. Voluntary repatriation, 2. Relocation to third country, 3. Local integration as outlined by the Global Compact on Refugees (UN, 2018), although actual implementations are often subjected to the wills of the host sovereign-state. Recent studies have suggested that local integration often have a net positive economical impact on the surrounding region (Alix-Garcia et al., 2018, Rummery A., 2019, IFC., 2018).

The United Nations Department of Economic and Social Affairs have published a set of 17 Sustainable Development Goals (herein SDG) to be achieved by 2030 (UN, 2015). Special attention are drawn to Goals 1 and 10 that are particularly relevant to this study.

- *Goal 1: End poverty in all its forms everywhere*
 - *Target 1.1: By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day*
 - *Target 1.4: By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance*
 - *Target 1.b: Create sound policy frameworks at the national, regional and international levels, based on pro-poor and gender-sensitive development strategies, to support accelerated investment in poverty eradication actions*
- *Goal 10: Reduce inequality within and among countries*
 - *Target 10.1: By 2030, empower and promote the social, economic and political*

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inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status

- *Target 10.7: Facilitate orderly, safe, regular and responsible migration and mobility of people, including through the implementation of planned and well-managed migration policies*



Having up-to-date map is therefore paramount for short and long term humanitarian projects, from the delivery of essential medicine, spatial and policy planning, to population estimation, quality and timely maps are essential to improve future decision making in both humanitarian and non-humanitarian context. Although we have seen an overall net increase in the amount of buildings mapped on the [OpenStreetMap](#) platform, contribution is still skewed towards developed cities and countries. Patterns of episodic contribution maybe observed post disasters, but the contributed data inequality is not easily reconciled ([Herfort et al., 2021](#)) (*see figure 1.1*).

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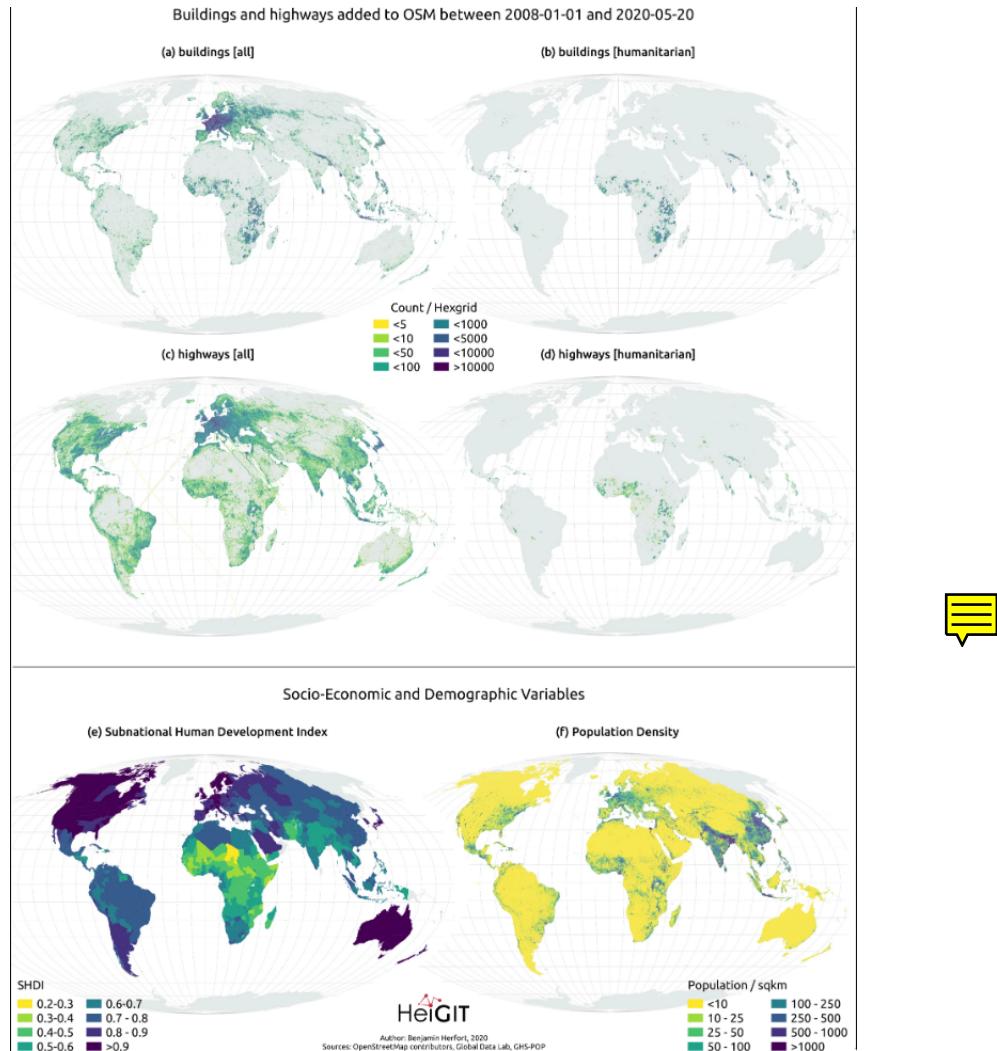


Figure 1.1: Data contribution of buildings and highway in all and humanitarian settings within OSM (Herfort et al., 2021)

Part of the reason for this could be traced to both the knowledge of volunteer contributors and commercial interest, but further discussion will be beyond the scope of this study (Anderson et al., 2019, Veselovsky et al., 2021, Yang et al., 2016). Henceforth, the overarching theme of this study is how can technology help reduce the geospatial data inequality in informal settlements. As the topic and data provider of this project, the Humanitarian OpenStreetMap Team (herein HOT) have been at the forefront of us-

ing open and crowd sourced mapping data to support humanitarian causes from shorter term disaster response to longer epidemiology and microfinance campaigns (HOT, 2021). and with the advancement of Deep Learning in the last decades, AI-assisted mapping have became a major topic for innovation (e.g. Herfort et al., 2019, Kuffer et al., 2016, Wurm et al., 2021, Quinn et al., 2018).



Study Areas of Interest

Kalobeyei, Kakuma, Turkana, Kenya

The Kakuma camp was first established in 1992, located in the rural North-West county of Turkana, Kenya. The camp was initially established to provide accomdation to the refugees fleeing the Second Sudanese Civil War as a temporary solution. However, as the conflict dragged out and followed by subsequent conflicts in the nearby region, the Kakuma camp have therefore been running for the past 30 years. As of 2020, Kakuma is home to 157,718 refugees with increasing number coming from the more recent Somalian and Ethiopian-Eritrean conflict (IFC., 2018, UN-HABITAT, 2021).

The Kakuma refugee camp have fluctuated in population as a response to demand, however, a dramatic increase in population between 2013 and 2014 has culminated into the development of Kakuma 4 Camp and the Kalobeyei Settlement and the Kalobeyei Integrated Socio-Economic Development Plan (KISEDP). The settlements benefited from a much better spatial planning in order to facilitate inclusive socio-economic development (UN-HABITAT, 2021, UNHCR & DANIDA, 2019) (*see figure 1.2*). Both the Kakuma and Kalobeyei refugee camps have local integration as the targeted solution (UN-HABITAT, 2021, UNHCR & DANIDA, 2019). A comprehensive study of the formal and informal economy of Kakuma refugee camp conducted by the International Financial Corporation (IFC, 2018) suggests that that market catering for the refugees and surrounding towns is estimated at KES 1.7 billion (USD \$16.4 million). The econom-

ical vibrancy of local integration have improved the economy of impoverished Turkana county significantly. However, challenges remain in integration into the wider Kenyan economy.

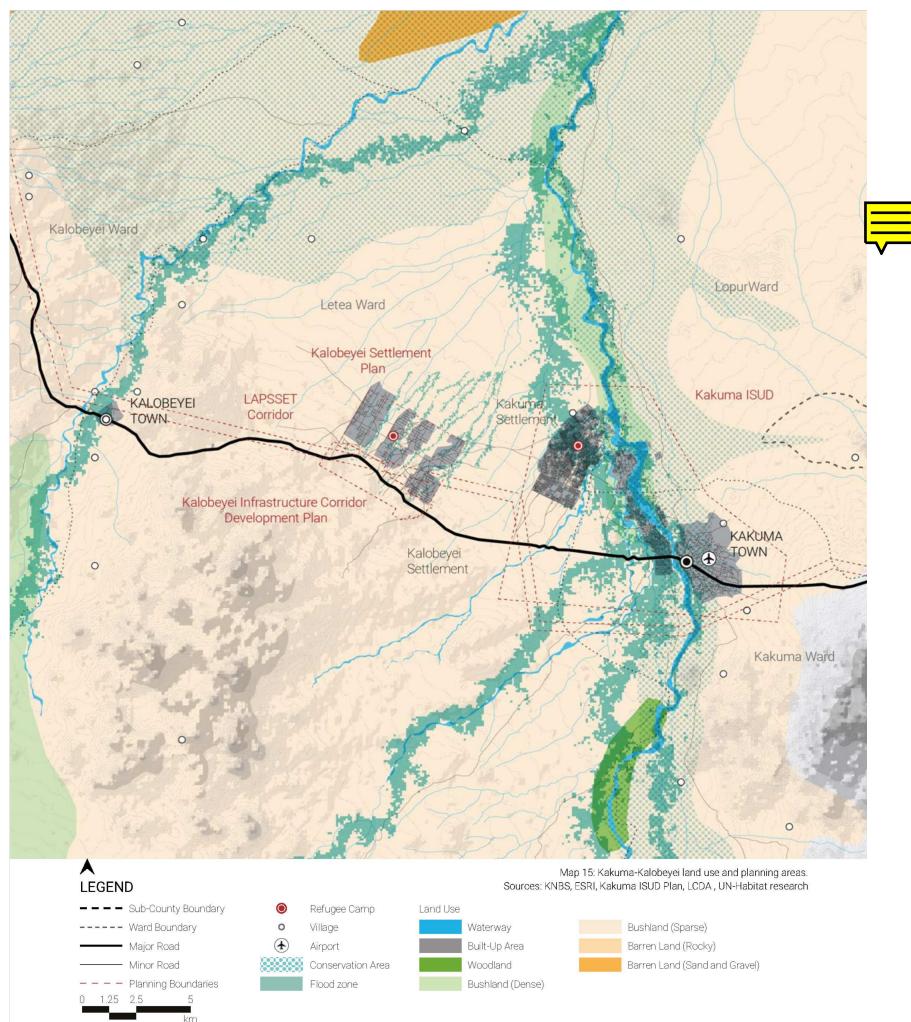


Figure 1.2: The Kakuma-Kalobeyei land use and planning areas (UN-HABITAT, 2018)

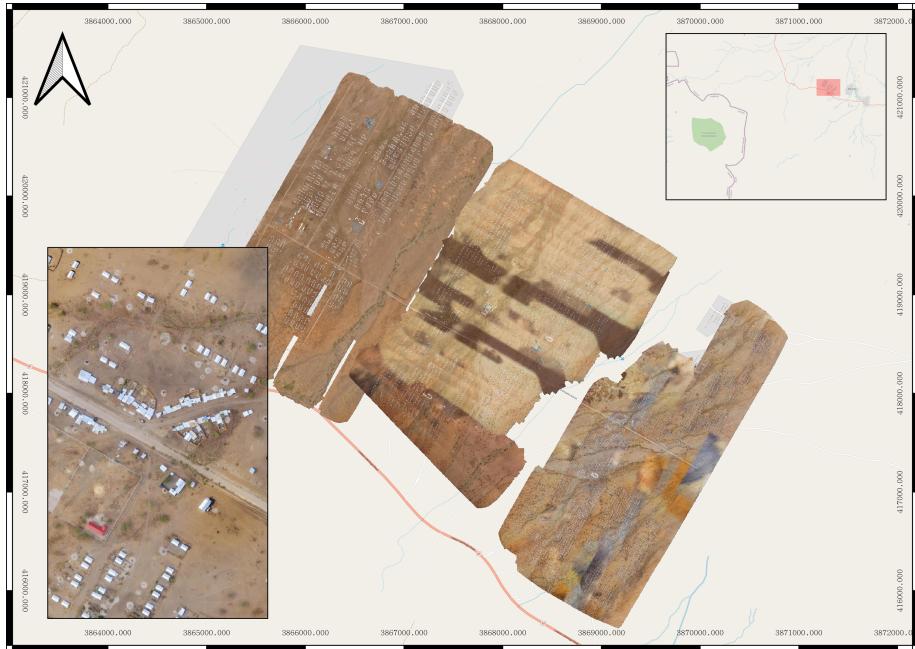


Figure 1.3: RGB UAV imagery of the Kalobeyei settlements in rural Turkana from OpenAerialMap

Dzaleka, Dowa, Malawi

Originally an infamous prison camp under the Banda's Malawi Congree Party regime, the area was converted to become the Dzaleka Refugee Camp in 1994. Unlike the Kakuma and Kalobeyei camps, the Dzaleka Refugee Camp is located in the heart of Malawi, 45 km away from the capital Lilongwe, where it is home to around 52,000 refugees and receive on average 300 new residents every month. Most coming from the Great Lakes area, in particular, the Democratic Republic of Congo and Burundi. However, resurgence of past conflicts between the Republic of Congo and D.R. Congo have caused an increased of influx in recent years (UNHCR, 2014, Kaval E., 2016). Much of the infrastructure in the Dzaleka camp remain rudimentary at best, and very little resources and statistics were available via the UNHCR and UNDP portals. The Northern extension to the Dzaleka main camp is known as the Katubza extension (*referred to as Dzaleka North by the rest of this study*), it is a well-planned plot of land consisting of 423 shelter

shelters and were still in construction as of March 2021 (Gross G., 2021 & UNHCR, 2021) (*see figure 1.4*).

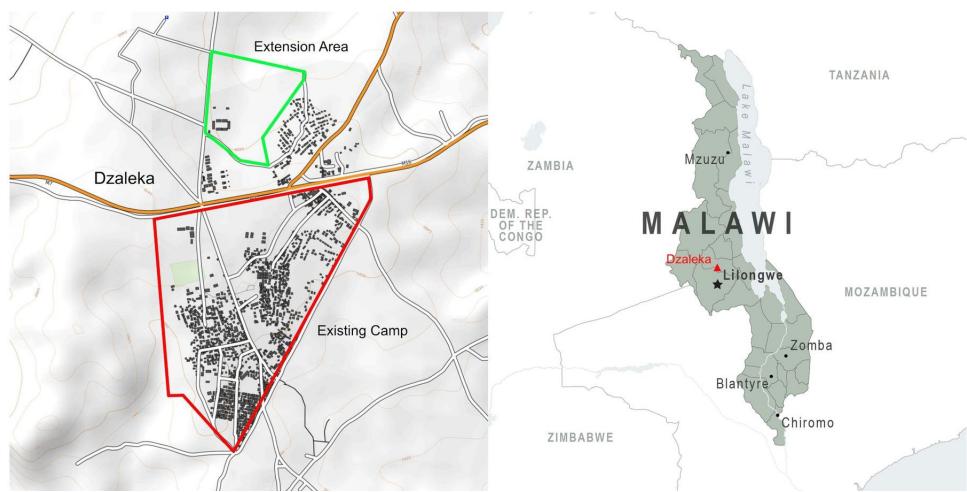


Figure 1.4: The main Dzaleka Refugee Camp and the Katubza extension plan (Dzaleka North) designed by Urban Design Advisor to the UNHCR Werner Schnellenberg (Gerhard G., 2021).

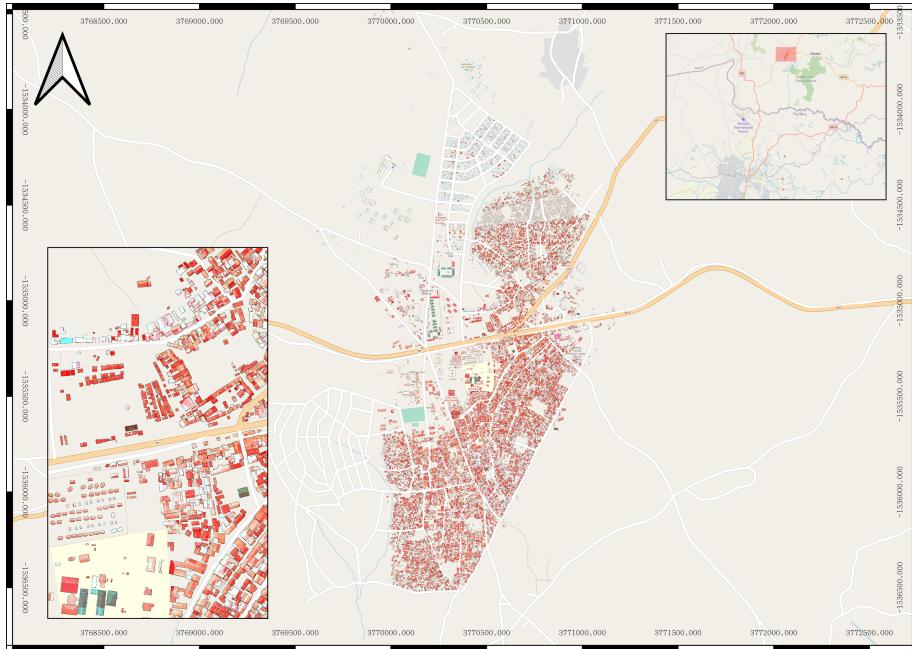


Figure 1.5: Digitised rooftop of the Dzaleka and Dzaleka North camps by HOT volunteers

Although hosting of refugee camps are often seen as a burden on the surface level, in reality, many refugees are often more educated than the local population, which brings with them entrepreneurial ability and provide the local-area with extra labour force (Alix-Garcia et al., 2018). With constant stakeholder pressure for relocation and closure, showcasing of the refugee camps local economic impact and the potential of, aiding the formation of pro-poor policy development(Cities Alliance, 2022).

Literature Review

Remote Sensing of Informal Settlements

Remote sensing of the urban environments have always been the less orthodox topic in remote sensing research, but simultaneously, it is the topic that essentially funded many long-standing satellite programs due to its proximity to reconnaissance and surveillance applications (e.g. the Landsat and SPOT programs). The complexity of human built environments often consist of using very different materials in conjunction to each other in a dense environment. From power-lines, factories, car-park, to leisure-parks, imaging of urban environments therefore requires imagery high in both spatial and temporal resolution. Urban remote sensing calls for techniques that extracts geometry, textural, and other physical features as oppose to the more common spectral based index approach used in ecological or environmental remote sensing (Jensen J., 2007, NRC., 1998). Higher granularity urban remote sensing have until very recently remained in the monopoly of defense and reconnaissance services.

Informal settlement and slums mapping of developing countries require very high resolution (VHR) images which was unavailable until the turn of the century. The relatively new technology thus only began to gain traction within the last 2 decades. Particularly with the increase in the availability of civilian commercial VHR satellites. Increase in computational power had enabled novel techniques such as multi-layer machine learning, textural analysis, and novel geostatistical methods to emerge (Kuffer et al., 2016).

Due to frequent repeat coverage of satellite's orbit, they can be used to fill in between periodic census that are costly and time consuming to conduct. Census especially conducted in developing areas also does not do a good job in capturing larger scale units and spatial patterns, potentially overlooking others socio-economic determinants such as access to amenities and infrastructure, adequate pro-poor policy development hinges on the availability of up-to-date and good quality analysis (Kuffer et al., 2016, Sliuzas et al., 2017). Remote sensing of settlements largely falls under 2 categories, rural or urban. Due to the different make-up of socioeconomic context and urban morphology, sensing of rural and urban settlements require different parameters. Additionally, there's no "one size fit all" way to generalise informal and formal settlement across the world, as physical geography, topography, cultural, and available resources often dictate the distribution, development, and settlement clusters pattern. These unique requirements have thus made deep learning techniques particularly useful, and many applications of deep learning in remote sensing have therefore been in the urban domain (Ma et al., 2019).



Deep Learning in Urban Remote Sensing

The following section will be divided into 3 parts. The first part reviews the concept of Computer Vision (herein CV) as a study subject, previous common practices, and the evolution towards data-driven Deep Learning. The second part will focus on domain specific review of recent AI-based segmentation practices on building segmentation and particularly the recent practices in informal settlement segmentation. Lastly, the third part will explain the mechanism of the Convolutional Neural Network, the class of neural networks commonly used for CV tasks.

Computer Vision and a brief review of Convolutional Neural Networks

Prior to the paradigm shift towards data-driven and ML based segmentation techniques, image segmentation were performed manually with the aid of a few algorithms (Pal &

Pal, 1993). The image segmentation tasks often starts with acquiring less-noisy imagery or data, this is followed by applying multitudes of CV based edge detector (e.g. Sobel, Prewitt, Marr-Hildreth) or Grey-Level Co-occurrence Matrix kernel (e.g. Haralich Texture) (e.g. Kuffer et al., 2014, Kuffer et al., 2016, Wurm et al., 2017). This can be considered to be the pre-processing steps necessary to extract information to select the parameters for the segmentation algorithms. (Pal & Pal, 1993, Blaschke T., 2010, Blaschke et al., 2014). The field of CV based segmentation experienced an akin to a Kuhnian paradigm shift (Kuhn T., 1962) when Krizhevsky et al. (2012) AlexNet won the ImageNet challenge, it reinvigorated the use of multi-layered neural network in CV tasks (LeCun et al., 2015). The timing of the paradigm shift coincided with the increase in computation power provided by Graphical Processing Unit (GPU) have enabled CNNs to be successfully applied across domains ranging from biomedical imaging to remote sensing (Ma et al., 2018, Zhu et al., 2017, Zhang et al., 2016, Wurm et al., 2019).

In the field of CV, there is generally 4 types of application: 1. Semantic segmentation, 2. Classification and localisation, 3. Object detection, and 4. Instance segmentation (*see figure 2.1*) (Stevens et al., 2020). This study will conduct semantic segmentation of binary classification between built-up and no built-up.

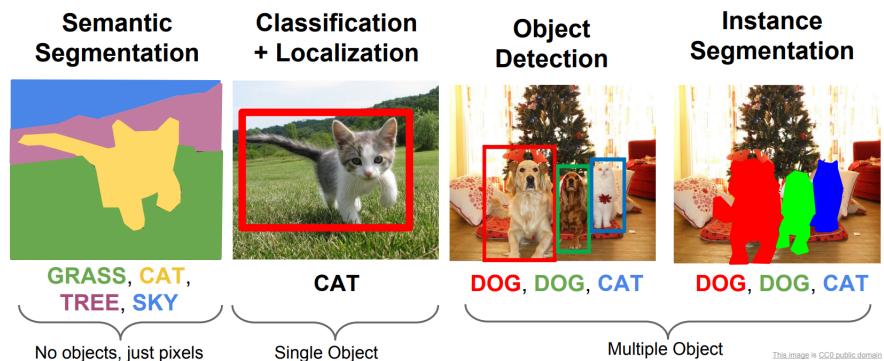


Figure 2.1: The four main types of Computer Vision tasks (Stanford University, 2022)

The purpose of semantic segmentation is to assign a named (semantic) classification

to each and every single pixel of the input image. This is commonly applied in remote sensing of Land Use Land Cover classification where every single pixel will be assigned and Land Cover or Land Use type. Another application is binary segmentation where the model will only be trained to assign a named classification to a particular clusters of associated pixels. This is more common in single class segmentation. The difference between mere classification and segmentation is that the semantic segmentation output a mask over the pixel will be created, where each pixel within the mask belongs to the same semantic task; meanwhile, classification only gives a confidence of semantic of the whole scene without assigning the classification to each pixel.

UAV-based informal settlement segmentation

The advent of orthorectified photos from Surface-from-Motion have drastically democratised the collection of VHR imagery. Not only are UAV images economical to procure, the spatial resolution for informal settlement application could only be rivaled by perhaps the best reconnaissance or commercial satellite which is either difficult or very expensive to obtain. Therefore the availability of open-data platform such as the OpenAerialMap could play a key role in enabling the AI-assisted mapping.

Fundamentals of Deep Learning and Convolutional Neural Networks

Prior to the resurgence of popularity in DL, the set of methodology associated was known as a multi-layered perceptron. Initially inspired by a mathematical analogy to codify the function of a single neuron by the seminal Psychological review paper published by Rosenblatt F. (1958). Like a human neuron, The properties of a perceptron on the most fundamental level takes an information/numerical input, stores and apply transformation, and create an output. Through stacking of basic perceptrons, a multi-layered perceptrons structure can be created. In order for such structure to be computationally useful, it must satisfy the following criteria:

1. Collections of connected perceptrons are capable of plasticity (i.e. changing values) through training.
2. Perceptrons will form dominant pathways that "fire" (activate) together.
3. Through training, perceptrons will learn to apply positive or negative reinforcement to facilitate minimising error (e.g. assigning and changing "weights").

The particular group of such perceptron structures used in CVs are known as Convolutional Neural Network (herein CNN). The most basics of CNN consist of 3 parts:

1. A hidden layer, 2. Multiple hidden convolution and pool layers, 3. An output layer which provides with the segmentation result and the associated confidence level (*see figure: 2.2 2.3*). Therefore, a Deep-Learning Neural Network system is string together by a series of inter-connected layer of which its parameters are adjustable to adapt to the data provided. Through careful iterative training and adjustment, the system can generalise well not only to the training and validation data, but to future datasets as well.

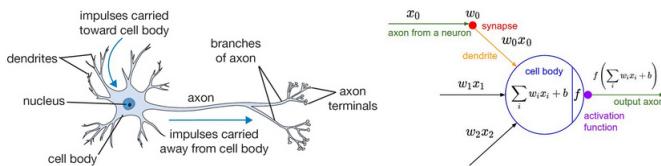


Figure 2.2: Schematic analogy diagram between a biological neuron and an artificial perceptron (Fumo D., 2017).

$$f\left(\sum_{i \dots n} w_i x_i + b\right) \quad (2.1)$$

- Where:
 - f = Activation function

- $\sum_{(i \dots n)}$ = Summation of i to nth dimension
- $w_i x_i$ = Weights multiplied by original input variable (x)
- b = bias

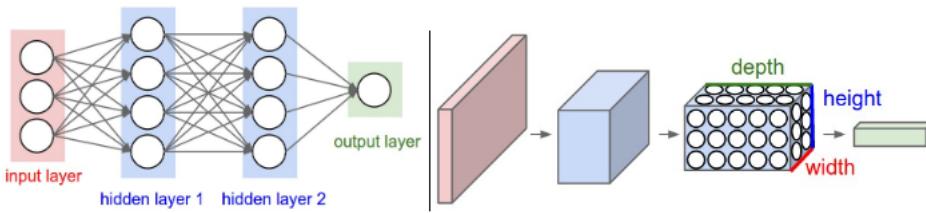


Figure 2.3: Schematic diagram of a CNN (Stanford University, 2022).

Convolution and Pooling

The hidden layers of the CNN is where the network performs representation learning, where with each layer in depth learns more abstract features of the input training image. While not often the case, it is conventional practice to **interleave** the convolutional and the pooling layers (Stevens et al., 2020). **The convolutional layer employs a sliding kernel which applies the weighted filter as displayed in 2.1.**

The convolutional layer essentially treats every image pixel as vector in a 3-Dimensional layout with input of ($Batch\ Size, Channel_{in}, Height, Width$), the convolutional kernel slides and apply the weighting and bias terms to extract deeper features (*see figure: 2.4*) (Stevens et al., 2020), thus, learning more deeper features which creates the output of ($BatchSize, Channel_{out}, Height, Width$). The full transformation per convolutional layer transform **equation: 2.1** of each pixel into **equation: 2.2.3**.

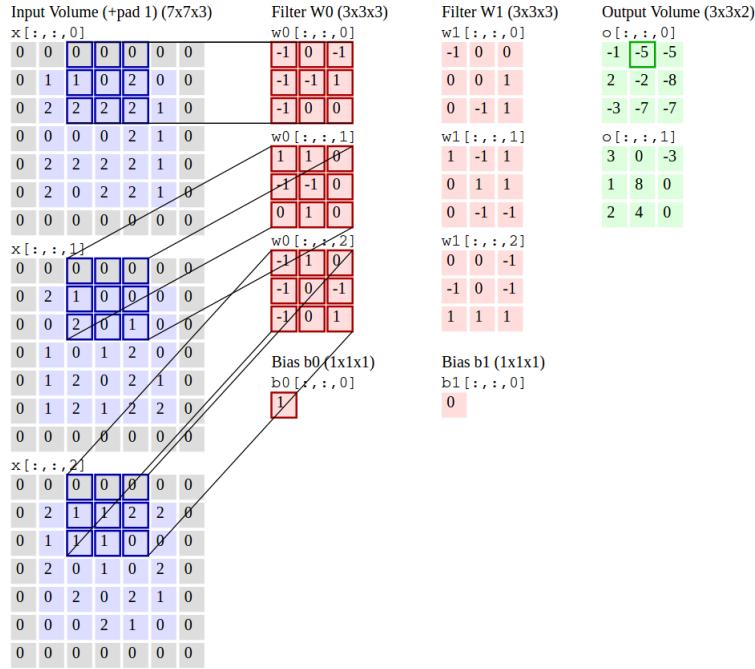


Figure 2.4: 3 x 3 Convolution (Stanford University, 2022).

$$out(N_i, C_{outj}) = bias(C_{outj}) + \sum_{k=0}^{C_{in}-1} weight(C_{outj}, k) * input(N_i, k)$$

- Where:

- N = Batch Size
- C = Channels
- k = Kernel Size
- *Further details can be found in [PyTorch documentation for nn.Conv2d](#)

(2.2)

The pooling layer reduces the dimension by downsampling by applying conventionally, a smaller kernel which extract the desirable value when applied. Maximum Pooling,

which only return the largest value in the downsampling kernel is common and is used for the network architecture of this experiment (Stevens et al., 2020). The pooling layer scale down the image while retaining the most crucial information (see figure: 2.5).

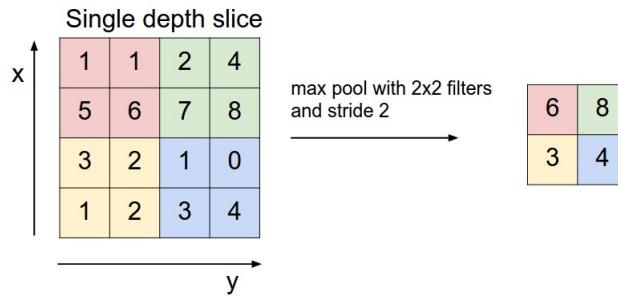


Figure 2.5: Max pooling (Stanford University, 2022).

Optimiser and the Binary Cross Entropy Loss function

With each complete pass through the neural network, the output is then compared against the validation result for error calculation. The summed average of loss thus defines the cost function landscape from which the error value is calculated against, penalising when prediction is incorrect and rewarding if otherwise. This enables backpropagation and the adjustments of the weights and biases in the proceeding pass. Due to the binary segmentation task for this study, the Binary Cross Entropy loss function was used to measure error equation: 2.2.3.

$$l(x, y) = L = \{l_1 \dots l_N\}^T, l_n = -w_n[y_n * \log x_n + (1 - y_n) * \log(1 - x_n)]$$

- Where:
 - N = Batch Size
 - $l(x, y)$ = loss(Probability, Binary Classification)
 - l_n = loss at sample n
 - *Further details can be found in PyTorch documentation for nn.BCELoss

(2.3)

The optimiser controls the gradient descent, it is the hyperparameter which controls the size of step being taken down the negative gradient of $-\nabla C$ in the cost function landscape. A suitable optimiser can prevent gradient descent to be trapped at a local minimum through iterations. The optimiser of choice for the experiment is the Adam optimiser, The Adam (Adaptive Momentum Estimator) developed by Kingma & Ba (2017) extends the Stochastic Gradient Descent (herein SGD) by introducing concepts of momentum and second moments of gradient (see appendix 7.1). Adam maintains a separate learning rate for each parameter and have became the standard pick of optimiser since.

Backpropagation and the chain rule

In order for a neural network to improve, the weights and bias are changed accordingly to minimisation of the cost. This is computed as a step-wise function as a negative vector against the cost landscape. For which each parameter of the weights and biases of each neuron within the neural network is defined as a chained function against the cost in equation 2.4. In other words, what is the derivative of the cost function with respect to the chain of weights and biases derivatives.

$$\frac{\delta C}{\delta P^i} = \frac{\delta(w^L x^{i-1} + b^i)}{\delta P^i} \frac{\sigma[\delta(w^i x^{i-1} + b^i)]}{\delta(w^i x^{i-1} + b^i)} \frac{\delta C}{\sigma[\delta(w^i x^{i-1} + b^i)]} \quad (2.4)$$

- Where:

- δC = Derivative of Cost Function
- δP^i = Derivative of a Parameter, which could be the w^i weight or b^i bias or for activation function $\delta(w^i x^{i-1} + b^i)$ at layer i

- x = Input Variable
- σ = Activation Function (e.g. ReLU, Sigmoid)

Which when *equation 2.4* is summed over all parameters of layer i becomes *equation 2.5*

$$\nabla C = \frac{\delta C}{\delta P^i} = \sum^{n_i-1} \frac{\delta(w^L x^{i-1} + b^i)}{\delta P^i} \frac{\sigma[\delta(w^i x^{i-1} + b^i)]}{\delta(w^i x^{i-1} + b^i)} \frac{\delta C}{\sigma[\delta(w^i x^{i-1} + b^i)]} \quad (2.5)$$

Thus, taking the negative gradient $-\nabla C$ will provide the gradient descent step hopefully towards the global minimum.

Essentially, using CNN and DL methods to perform semantic segmentation through repeated iterations of the above processes have proven to generalise well to complex dataset. Althought the aim of this study is not to produce a deployable model necessarily, the study will lay the foundational groundwork for a data-drive evaluation of different CNNs elaborated in section 3.3.

Data and Methodologies

Data

Raster pre-processing

All imagery were first downloaded from OpenAerialMap and resampled to 15 cm resolution using cubic-spline interpolation, subsequently reprojected to EPSG:3857. Normalisation of raster data per colour band (RGB) to adequately re-scale the raster value to be converted to the PNG file format. This is perhaps one of the most important pre-processing step. A 2-step normalisation were performed on each band for each UAV imagery.

First, the z-score normalisation noramlises the images according to the retrieved standard deviation (*see equation 3.1*). This scales the every pixel to the global statistics for each colour band, keeping proportional ratio while reducing the effects of outlier. The z-score normalised result is then linearly scaled to range of 0 to 255 to be converted to 8-bit .png type file (*see equation 3.2*).

$$p_z = \frac{(p - \mu)}{\sigma} \quad (3.1)$$

- Where:

- p_z = z-score normalised pixel value
- p = Original pixel value

- μ = Mean value of global pixel
- σ = Standard Deviation of global pixel

$$p_{8bit} = \frac{[p_z - \min(p_z)] * 255}{[\max(p_z) - \min(p_z)]} \quad (3.2)$$

- Where:

- p_{8bit} = Pixel output normalised between 0 to 255
- p_z = z-score normalised pixel value from 3.1

After per-band normalisation, the imagery bands were stacked with the associated labels. In order to increase the data quantity, $\frac{2}{3}$ overlapping steps cropping was performed. This resulted in the image label pair count of Train n = 2606, Validation, n = 1303, and Test n = 435 respectively where each sets were split at a ratio of 60, 30, and 10 % respectively. With augmentation applied, this increased the available data to Train n = 18242, Validation n = 3909, and Test n = 435. (see figure. 3.3 & see table ??)

Vector pre-processing

Semantic segmentation tasks require very high quality and quantity of data input in order to successfully perform. The reference dataset must therefore be highly accurate, otherwise this could cause the model to misclassify. There were two significant issues, firstly, due to the centermeter level resolution of the UAV raster data, the abundance of building polygons from OpenStreetMap and Google Open Buildings V1 Polygon did not spatially align well even after reprojection. Secondly, there were a temporal mismatch between such vector labels and the UAV in collection, causing some labels without building and buildings without labels.

Fortunately, prior to this study, the HOT team and volunteers have began collecting labels specifically digitised on the UAV imagery of Dzaleka and Dzaleka North camps *see figure 1.5*. Although spatially and temporally aligned, these vector labels still did not have a DL CV tasks in mind, hence, labelling around edges of buildings and UAV motion artefacts (Smith et al., 2016, Caravick et al., 2016) *see figure 3.1* may have been missed.

With the Kalobeyei camp unlabelled, this study created albeit in less quantity, a carefully digitised, pixel-aligned dataset which is suitable for DL tasks. The combination of datasets provided gave this study an unique opportunity to investigate how the different datasets could influence segmentation results.

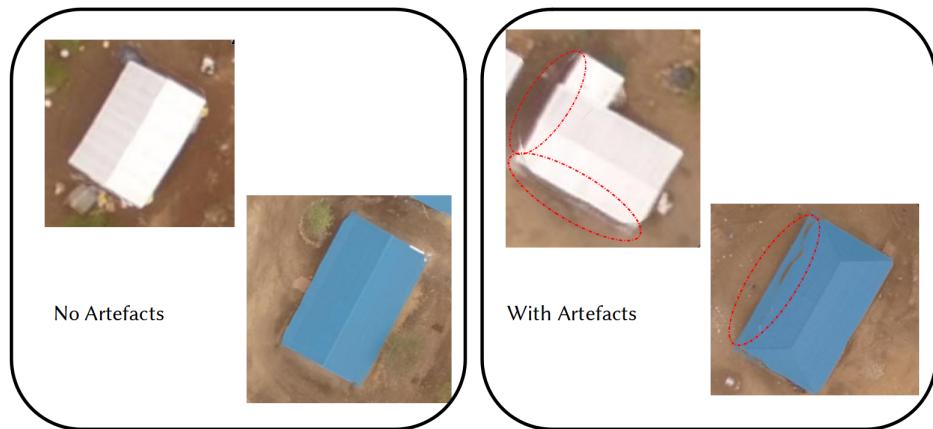


Figure 3.1: Motion artefacts unique to UAV imagery

Data Augmentation

Data augmentation is perhaps one of the most crucial task in training a robust neural-network. It is an economical way of increasing generalisability without increasing model complexity, data augmentation achieve this through, firstly increasing the quantity of training and validation data, secondly encompassing a greater range of textural, geometrical, and colour variability throught the creation of augmented pseudo-data (Shorten

& Khoshgoftaar, 2019; Kinsley & Kukiela, 2020; Howard & Gugger, 2020; Zoph et al., 2019).

Data augmentation can generally be split into 3 categories: 1. Geometric/Affine distortion, 2. Colour distortion, and 3. Noise distortion. The application of which types of distortion to the *Train* and *Validation* dataset is highly dependent on the context of the semantic task. Therefore, care must be taken as to not introduce mislabelling (*see figure 3.2*) (Ng A., 2018).

Augmentation categories:

- Geometric/Affine distortion
 - e.g. Flipping, Stretching, Rotation...
- Colour distortion
 - e.g. Colour Inversion, Solarise Colour, Greyscale...
- Noise distortion
 - e.g. Blurring, Contrasting, Salt & Pepper...

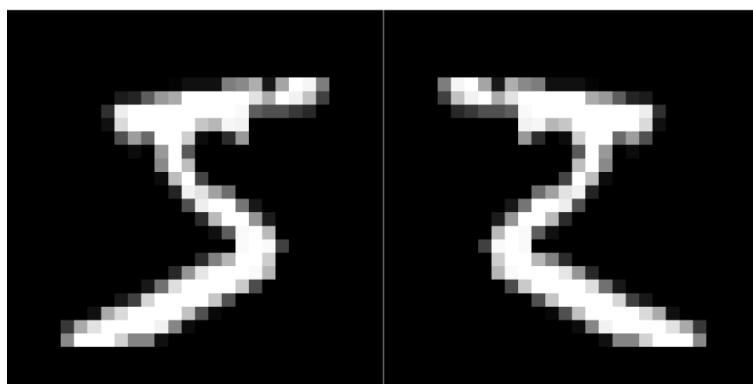


Figure 3.2: Perhaps geometric augmentation of horizontal flipping shall not be applied on the MNIST number of 5

Thus, the following augmentation were applied to the Train, Validation, and Test datasets respectively:

- Train - Inverse RGB, Horizontal Flip, Vertical Flip, Gaussian Blur, Contrast Increase, Solarise Colour
- Validation - Horizontal Flip, Vertical Flip
- Test - None

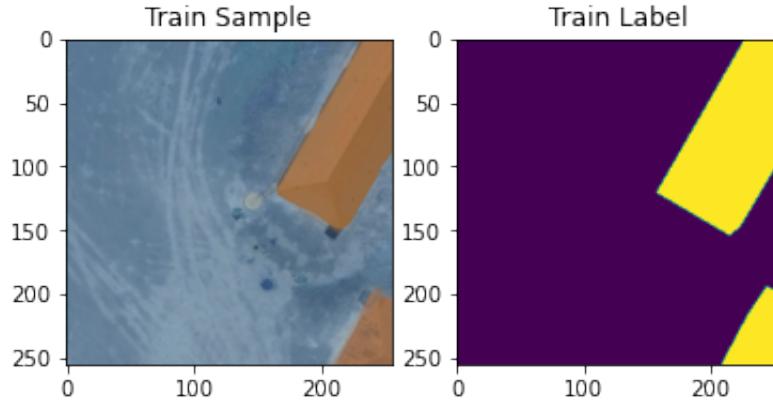


Figure 3.3: An example of Inverse RGB augmentation applied to the Train dataset.

Dataset input with augmentation			
Datasets	Train	Validation	Test
KBY	5719	1224	272
KBV + DZK + DZKN	18242	3909	435

Table 3.1: Resulted image and label pair for each dataset input configuration

Research Questions and experiment design

In order to train a model which performs well on UAV imagery, the motion artefact will be a significant feature for the model to learn. The combination of data availability have allowed a unique set of research questions concerning the input data quality and

experiment setup to surface.

Additionally, using pre-trained weights as a strategy is well-documented in literature to improve performance across many domains (Stevens et al., 2020 , Howard & Gugger, 2020), with numerous studies showcasing the sucess of cross-domain transfer training from classical CV datasets to remote sensing tasks (e.g. Audebert et al., 2017, Marmanis et al., 2016), One would expect the transfer training of CNN pre-trained on any dataset would provide it with an advantage. Therefore, it is important that this study also test the effects of the CNNs response to the initialised weights from ImageNet and the OCC building segmentation model.

1. RQ1: What is the optimal mixture of accurate and less-accurate labels and how does that affect the segmentation output result?
 - (a) How does the introduction of complex roofing materials affect result?
2. RQ2: Which is the best lightweight model given the limited data and computational resources for binary semantic segmentation?
 - (a) How does transfer training from various initilised weights affect results at different setup?

To test out U-Net and a few variations of the U-Net performance, The models will initially be trained on the pixel-perfect and less complex Kalobeyei dataset, this will be then be followed by introducing the Dzaleka datasets of higher complexity. Figure 3.4 show a snapshot of the diverse rooftops to be segmented in the available datasets. A comparison of performance between the U-Net variations (Ronneberger et al., 2015) and the Open-Cities-AI-Challenge (herein OCC) winning model is conducted (*see table 3.3.1*).



Figure 3.4: Collections of diverse and heterogeneous rooftops from the Kalobeyei, Dzaleka, and Dzaleka North datasets.

Architecture and hyperparameter selection

Model architecture and their associated hyperparameters selection is highly dependent on the computational resources and the task at hand (Ng A., 2018, Howard & Gugger, 2020). As this study aims to output a pixel-based binary segmentation which delineates building and non-building, and given the computational resources constraint, model selection were based on tried and tested architectures with relatively low number of training parameters.

The U-Net and U-Net variants

The U-Net architecture was first developed by Ronneberger et al. (2015) for the task of cell segmentation in biomedical electronmicroscope images. The architecture feature a symmetrical Encoder-Decoder structure (*see figure 3.5*) and as with many other CNN, the architecture have transferred successfully well into the remote sensing domains (Höser & Künzer, 2020, Höser et al., 2020, Xu et al., 2019). This symmetrical encoder-decoder type architecture is able to extract deeper features in the encoder layers, then recover

and interpolate spatial features in the connected unsampling decoder layers (Wurm et al., 2019).

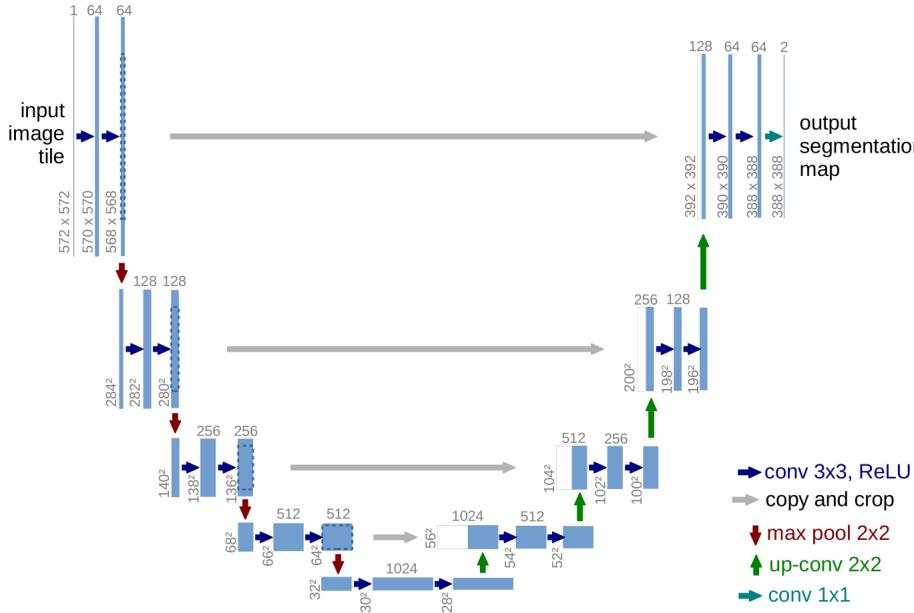


Figure 3.5: The Encoder-Decoder U-Net architecture (Ronneberger et al., 2015)

Changing the encoder architecture and the EfficientNet family

The ability to switch out the encoder structure allows the DL practitioner to experiment with more up-to-date architectures without changing the output shape. This drastically increases the combination of experiments that allow testing the best combinations of encoder-decoder structure suitable for the dataset. All of the experiments in this study were carried out using the high-level PyTorch API [Segmentation-Model-PyTorch](#) created by Yakubovskiy P. (2021). Whom was also the winner of the OCC challenge for UAV building segmentation which this study will transfer-train, and compare against.

In this study, the experiments with changed encoder were based on the EfficientNet family. There are three reasons for this decision. Firstly, at one of the last stage of the

OCC competition winning network, the EfficientNet B1 was used as an encoder. Secondly, the EfficientNet family are a set of network architectures that are structured and easy to scale up when computational resources become available. Thirdly, they are perhaps the best representation of generalised state-of-the-art architectures that have been tested and performed **phenomenally well** in classical CV datasets (*see figure 3.6*) (Tan & Le, 2020). In essence, these are sets of experiments that mix and match old and new architectural design.

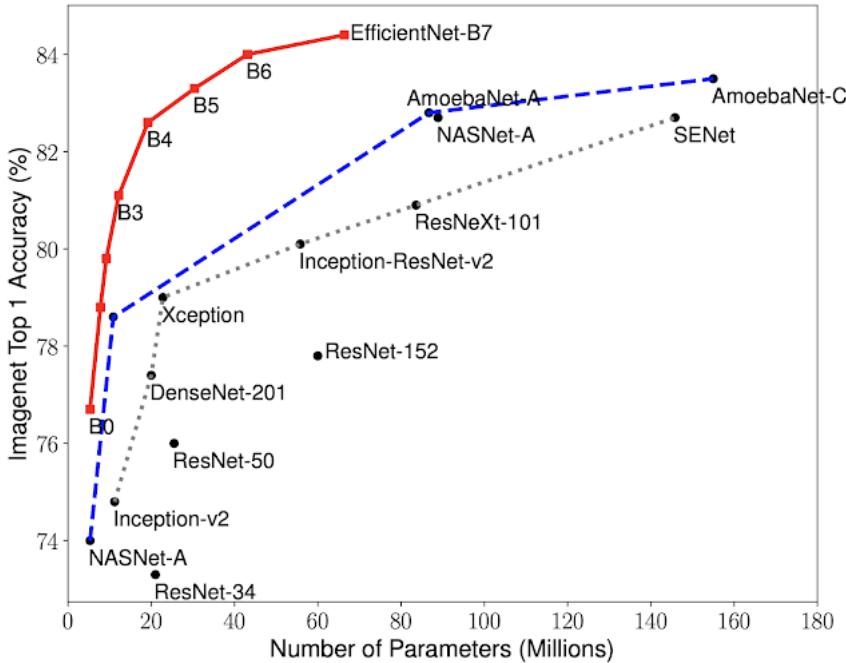


Figure 3.6: EfficientNet family Top 1% Accuracy Assessment in ImageNet (Tan & Le, 2020).

The EfficientNet family uses compound scaling which increases the height, width, and depth. The baseline architecture was generated using AutoML Neural Architecture Search (Elsken et al., 2019) which optimised for computational efficiency and accuracy (*see appendix 7.2*).

Therefore, the unweighted Four-layer U-Net, Five-layer U-Net, and the OCC winner weighted EfficientNet B1 U-Net are the key architectures the rest will compare against.

Trained Architecture Specification Table				
Encoder	Decoder	Initialised weights	Trainable parameters	Batch-size (8GB GeForce GTX 1070Ti)
4-layer U-Net Encoder	4-layer U-Net Decoder	None	776,3041	32
5-layer U-Net Encoder	5-layer U-Net Decoder	None	3110,0513	32
EfficientNet-B1	4-layer U-Net Decoder	None	700,5041	32
EfficientNet-B1	4-layer U-Net Decoder	ImageNet	700,5041	32
EfficientNet-B1	5-layer U-Net Decoder	OCC	875,7105	16
EfficientNet-B2	4-layer U-Net Decoder	None	821,1283	32
EfficientNet-B2	4-layer U-Net Decoder	ImageNet	821,1283	32

Table 3.2: The U-Nets and the variations thereof selected for this study

Hyperparameters and baseline model performance

The hyperparameters of a neural network are changable parameters which control the training process (Bengio et al., 2017, Stevens et al., 2020, Howard & Gugger, 2020). They include the batch size, optimiser, learning rate, weight decay, loss function, and learning rate scheduler etc. (*see table 3.4*). One of the most difficult process in DL is finding the correct hyperparameters value that cause the model to neither overfit or underfit the dataset. The strategies and options are often overwhelming, therefore this study does not concern itself with tuning the hyperparameters for all of the models but rather withholding them from changes so that a comprehensive **baseline** performance could be identified. This will provide a clear picture of the feasibility, uncover challenges and potentials. The result will provide insight on how to take this project further, so that further resources could be justified to scale future experiments.

Unchanged hyperparameters for the study experiments		
Hyperparameter	Value to be held constant	Description
Batch size	32 (16)	Amount of image and label pair shown to the CNN per iteration until the dataset is exhausted, standardised to batch size of 32 other than for the architecture of <i>EfficientNet B1 U-Net OCC</i> with a 5-layer U-Net decoder
Optimiser	Adam see <i>appendix 7.1</i>	Adaptive Momentum Estimator developed by Kingma & Ba. (2017)
Loss function	Binary Cross Entropy	... see <i>equation 2.2.3</i>
Learning rate	1e-3	Size of step to be taken down the negative gradient of the cost function landscape
Weight decay	1e-5	aka. L2 regularisation, is the sum of all weight squared added to the Loss function. This limits the weights from growing too much, making the loss function easier to fit
Training epochs	500	Number of complete cycles through either the training or validation dataset at designated batch size
Validation rate	10 epochs	Validation data are loaded every 10 epochs to monitor performance
Learning rate scheduler	Reduce Learning Rate on Plateau [factor (0.1), minimum (1e-8), epoch (20)]	A learning rate reduction when learning stagnates and stop improving for 20 epochs

Table 3.3: The hyperparameters and respective values to be held constant for every experiments in this study.

Accuracy Assessment

Detail and scrutable accuracy assessments are fundamental towards any classification based analysis. This section will introduce and break down the various lower order and higher order class-based (thematic) accuracy assessment. By explaining the characteristics of each metrics, this will provide a much more granular nature of accuracy assessment in the findings of section 4. In general, accuracy assessment in remote sensing can be divided into 2 categories: 1. Positional Accuracy & 2. Thematic Accuracy. Of which, Positional Accuracy deals with the accuracy of the location while Thematic Accuracy deals with the labels or attributes accuracy (Congalton & Green, 2019 & Bolstad P., 2019). With lower order metrics being more granular while higher order metrics more triturated but generalised.

The metrics described in this section form part of the larger family of accuracy assessment metrics that can be constructed from the confusion matrix (see figure 3.7)

		True condition		Prevalence $= \frac{\sum \text{Condition positive}}{\sum \text{Total population}}$	Accuracy (ACC) = $\frac{\sum \text{True positive} + \sum \text{True negative}}{\sum \text{Total population}}$
Predicted condition	Predicted condition positive	True positive	False positive, Type I error	Positive predictive value (PPV), Precision = $\frac{\sum \text{True positive}}{\sum \text{Predicted condition positive}}$	False discovery rate (FDR) = $\frac{\sum \text{False positive}}{\sum \text{Predicted condition positive}}$
	Predicted condition negative	False negative, Type II error	True negative	False omission rate (FOR) = $\frac{\sum \text{False negative}}{\sum \text{Predicted condition negative}}$	Negative predictive value (NPV) = $\frac{\sum \text{True negative}}{\sum \text{Predicted condition negative}}$
	True positive rate (TPR), Recall, Sensitivity, probability of detection, Power = $\frac{\sum \text{True positive}}{\sum \text{Condition positive}}$	False positive rate (FPR), Fall-out, probability of false alarm = $\frac{\sum \text{False positive}}{\sum \text{Condition negative}}$	Positive likelihood ratio (LR+) = $\frac{\text{TPR}}{\text{FPR}}$	Diagnostic odds ratio (DOR) = $\frac{\text{LR+}}{\text{LR-}}$	F_1 score = $2 \cdot \frac{\text{Precision} \cdot \text{Recall}}{\text{Precision} + \text{Recall}}$
	False negative rate (FNR), Miss rate = $\frac{\sum \text{False negative}}{\sum \text{Condition positive}}$	Specificity (SPC), Selectivity, True negative rate (TNR) = $\frac{\sum \text{True negative}}{\sum \text{Condition negative}}$	Negative likelihood ratio (LR-) = $\frac{\text{FNR}}{\text{TNR}}$		

Figure 3.7: The Confusion Matrix

Lower-order metrics

Precision, Recall, and Specificity

Precision and Recall, aka. Positive-Predictive-Value and Sensitivity/True-Positive-Rate respectively. The two metrics are often used together, another common denomi-

nation especially in remote sensing literature are User's Accuracy and Producer's Accuracy (Congalton & Green, 2019 & Wegmann et al., 2016). To avoid further confusion in nomenclature, **Precision** and **Recall** will be used from hereon.

Precision is the measure of correctly predicted Positive class *True Positive* against all positive prediction assigned to that class *True Positive + False Positive* i.e. Given the predicted results, of those that are predicted as positive, what proportion were True. It can be expressed mathematically as:

$$\text{Precision} = \frac{\text{True Positive}}{(\text{True Positive} + \text{False Positive})} \quad (3.3)$$

Meanwhile, **Recall** measures the correctly predicted Positive class *True Positive* against both the correct and incorrect prediction on the Positive reference class *True Positive + False Negative* i.e. Given the predicted results, of those that are referenced as positive, what proportion of those were True. It can be expressed mathematically as:

$$\text{Recall} = \frac{\text{True Positive}}{(\text{True Positive} + \text{False Negative})} \quad (3.4)$$

Specificity, aka. True-Negative-Rate measures correctly predicted Negative class *True Negative* against the correct and incorrect prediction on the Negative reference class *False Positive + True Negative* i.e. Given the predicted results, of those that are referenced as negative, what proportion of those were True. It can be expressed mathematically as:

$$\text{Specificity} = \frac{\text{True Negative}}{(\text{False Positive} + \text{True Negative})} \quad (3.5)$$

Therefore, higher **Recall** suggests the model is better at identifying positives and vice-versa higher **Specificity** suggests the model is better at identifying negatives. Since this is an exercise that aim to maximise the positive prediction as a binary building segmentation classifier, emphasise will be placed on maximising **Precision** and **Recall**.

Higher-order metrics

The following are higher-order accuracy assessment metrics, where they often encompass the lower-order accuracy assessment metrics mentioned in the above section. Thus, although higher-order metrics provide a more generalised assessments, they often suffer from granularity. Hence such metrics are often employed as a means to evaluate and rank DL based CV challenges and competitions (e.g. Kaggle Challenges), but they are less so effective in the detailed assessment of segmentation results.

Overall Accuracy

$$\text{Overall Accuracy} = \frac{\text{True Positive} + \text{True Negative}}{\text{True Positive} + \text{True Negative} + \text{False Positive} + \text{False Negative}} \quad (3.6)$$

The Overall Accuracy (herein OA) gives an easy to implement, general but incomplete answer of how well classification is doing. The metrics suffers when imbalance count of multiple-classes are involved.

Dice Score

$$\text{Dice Score} = 2 * \frac{\text{Precision} - \text{Recall}}{\text{Precision} + \text{Recall}} \quad (3.7)$$

The Dice Score aka. the F1 score calculates the harmonic mean of **Precision** and **Recall**, with contribution for both to be of balanced weightings, the Dice Score could be skewed by classification results with higher performance in either Precision or Recall. Additionally, the metrics does not take *True Negative* values into account if such statistics might be of interest.

Intersection-over-Union

$$IoU = \frac{A \cap B}{A \cup B} = \frac{\text{True Positive}}{\text{True Positive} + \text{False Positive} + \text{False Negative}} \quad (3.8)$$

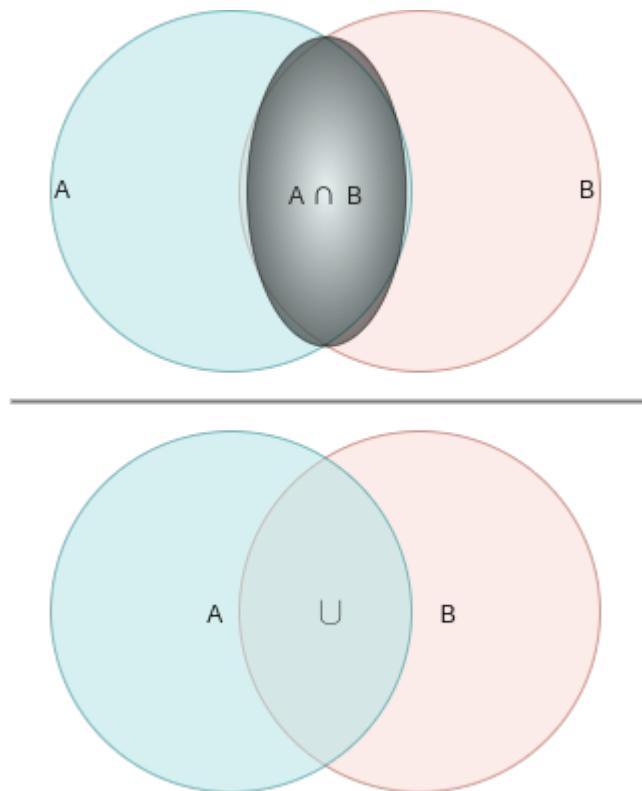


Figure 3.8: Schematic diagram of Intersection-over-Union

One of the most commonly used metrics as an assessment in Deep Learning Computer Vision competition. The Intersection-over-Union (IoU) aka. Jaccard Index is a geometric based accuracy **assessment**.

Project workflow

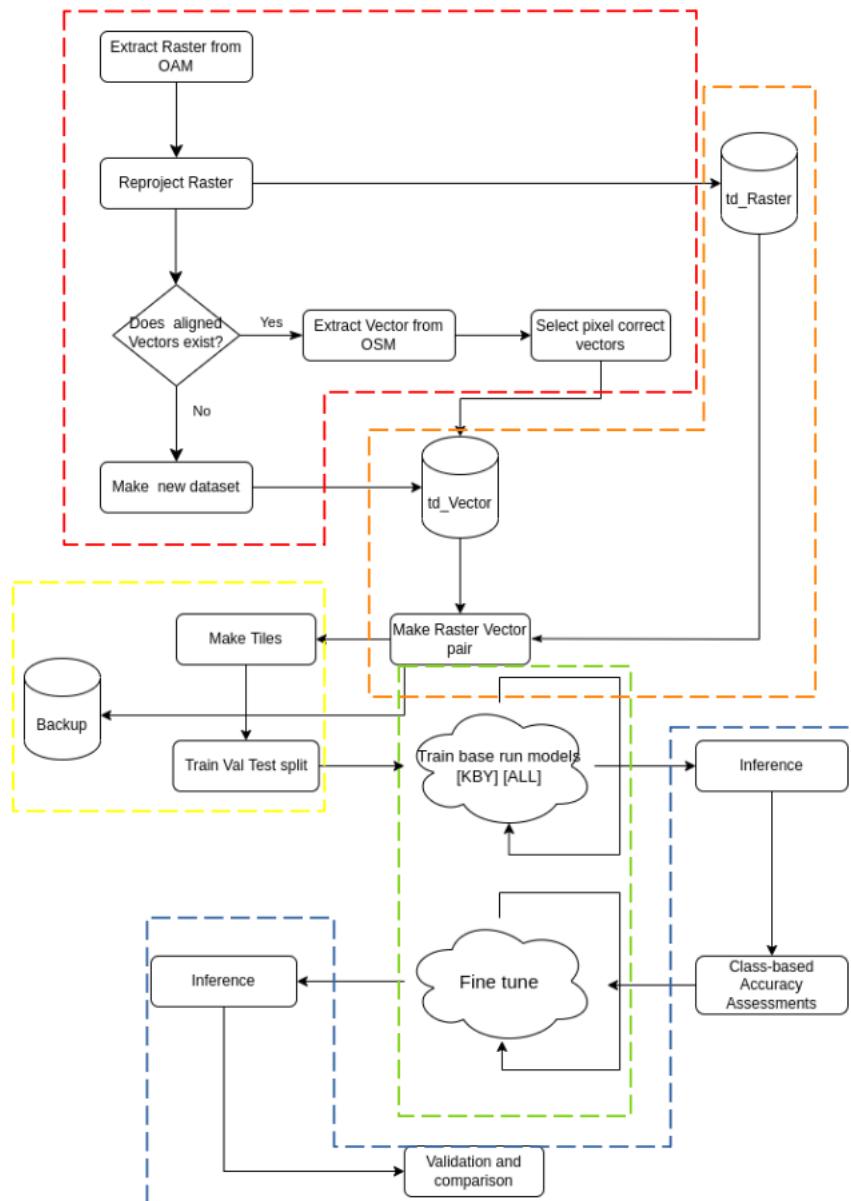


Figure 3.9: Project workflow

The workflow for this study consists of 5 main stages: 1. Download and Extraction, 2. Data pre-processing, 3. Data processing for loading, 4. Iterative Model training, 5.

Inference and Evaluation (*see figures 3.9 & 3.10*).

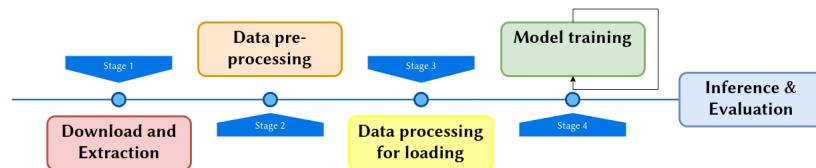


Figure 3.10: Simplified 5 steps project workflow with reference to 3.9

Findings and Discussion

The study have trained and tested on 5 different architectures with either no initialised weights or initialised weights pre-trained from ImageNet or OCC building segmentation models. For each experiment setup, there were 2 sets of dataset input (KBY and KBY + DZK + DZKN), for details (*see table 3.3.1*). Producing 16 sets of trained CNN and associated class-based accuracy assessments (*see figure 4.2*), for full experimental results, (*see Appendix 7.0.3*). On the whole, there were both expected and unexpected results. A reduction in every metrics were observed in every single experiment setup when the more complex Dzaleka camps datasets were introduced (*see table 4.2*). This was expected as it is more difficult to train the CNNs on the highly heterogeneous rooftops with similar texture to the surrounding environments. The *Precision* and *Recall* metrics did not vary too much between the architectures when trained only on the Kalobeyei dataset, with the exception to the transferred-untrained *EfficientNet B1 U-Net OCC* model. In contrast, the performance in differences is a lot more visible with the introduction of Dzaleka and Dzaleka North datasets.



An interesting observation is that with the *EfficientNet B1 U-Net* and the symmetrical 4-layer & 5-layer *U-Net*, both *Precision* and *Recall* increased when initialised on pre-trained ImageNet weights (*see table 4.3*), with the exception to *EfficientNet B2 U-Net* where it a decrease in *Precision* but a increase in *Recall* when compared to the network with non-initialised weights. This suggests that the increase in depth does not necessarily correspond to either an increase or decrease in performance in any particular

direction. For the non-weight initialised *4-layer to 5-layer U-Net*, there is an consistent albeit slight improvement in *Recall* but not *Precision*. This contrast the changes in Depth-wise changes, where increase in depth shows improvement mostly in the *Precision* but not *Recall* see table 4.1.

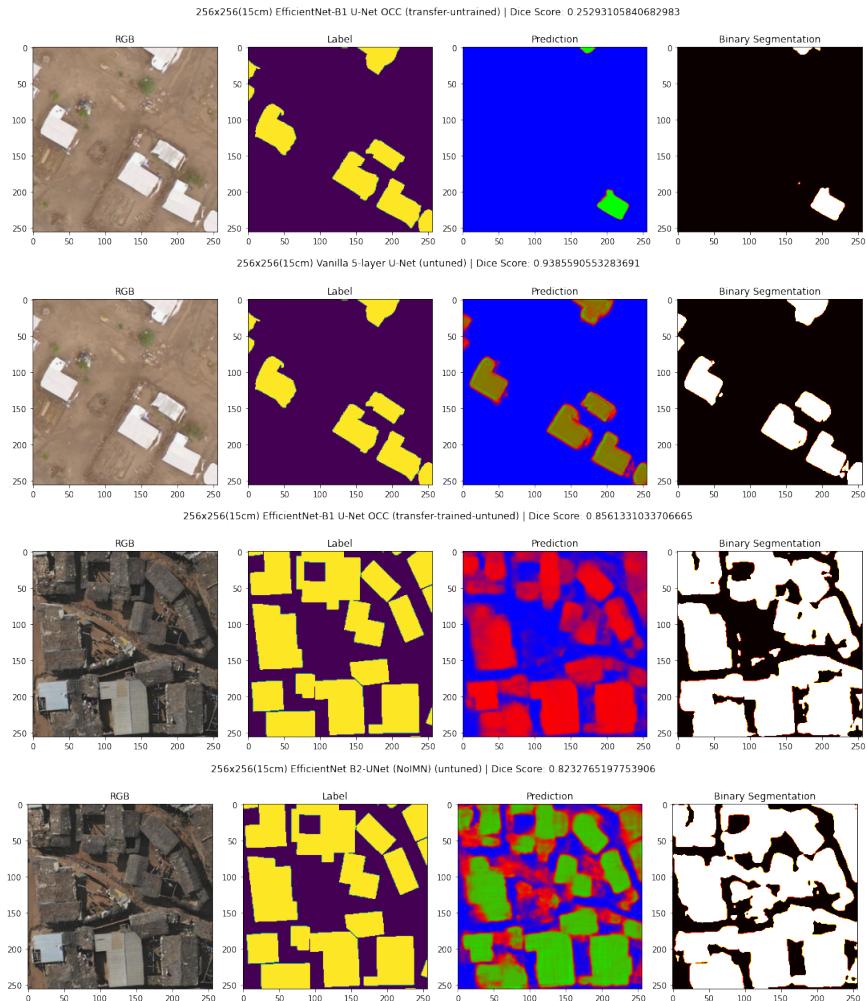


Figure 4.1: Sample of binary segmentation output of various combinations of tested architecture and experiment setup.

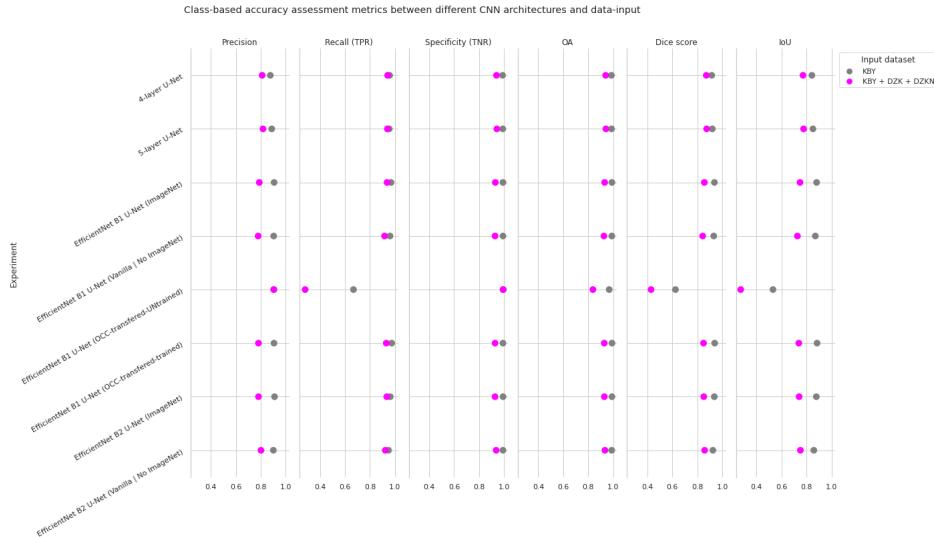


Figure 4.2: Class-based Accuracy Assesment metrics for respective CNN architectures and experiment input dataset.

The following sections compare the mean changes of *Precision* and *Recall* in the test dataset at paired CNNs' depth-wise, dataset-wise, and weight-wise change.

Depth-wise Precision and Recall change

Depth-wise Precision and Recall change				
Architecture	Initialised weights	Input dataset	Precision change	Recall change
4 to 5 layer U-Net	None	KBY	+0.011	-0.003
4 to 5 layer U-Net	None	KBY + DZK + DZKN	+0.007	-0.002
EfficientNet B1 to B2 U-Net	None	KBY	-0.003	-0.012
EfficientNet B1 to B2 U-Net	ImageNet	KBY	+0.003	-0.006
EfficientNet B1 to B2 U-Net	None	KBY + DZK + DZKN	+0.023	+0.006
EfficientNet B1 to B2 U-Net	ImageNet	KBY + DZK + DZKN	-0.006	-0.002

Table 4.1: Changes with architectures that had a depth-wise increased for each setup..

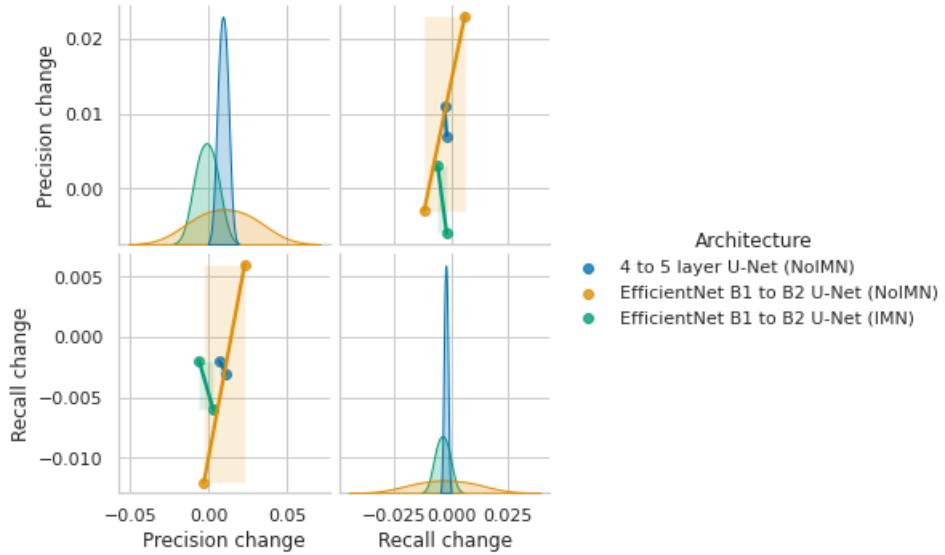


Figure 4.3: Regression plot for *Precision* and *Recall* change in relation to architectural depth-wise change.

There is a common misconception in the DL realm that deeper networks would always perform better. The comparison in *table 4.1* in a limited scope tries to address this question, the result suggests that improvements in both *Precision* and *Recall* only happened in non-weight initialised depth-increase from *EfficientNet B1 to B2 U-Net* trained on all datasets, achieving both the highest rate of increase in both metrics. In comparison to the same architecture change and dataset input with initialised weights from ImageNet, both metrics experienced a decrease. Meanwhile in other experiment setup, no significant trends can be drawn and thus the assumption does not hold, although results might drastically differ with increase of dataset, increase in batch size, and when experimenting with much deeper architectures not available to this study due to computation constraint.

Dataset-wise Precision and Recall change

Dataset-wise (KBY to KBY + DZK + DZKN) Precision and Recall change			
Architecture	Initialised weights	Precision change	Recall change
4-layer U-Net	None	-0.065	-0.016
5 layer U-Net	None	-0.07	-0.0153
EfficientNet B1	None	-0.124	-0.044
U-Net			
EfficientNet B1	ImageNet	-0.119	-0.032
U-Net			
EfficientNet B1	OCC	-0.002	-0.387
U-Net (OCC)			
EfficientNet B1	OCC transfer-trained	-0.125	-0.043
U-Net (OCC)			
EfficientNet B2	None	-0.099	-0.026
U-Net			
EfficientNet B2	ImageNet	-0.128	-0.028
U-Net			

Table 4.2: Changes when the Dzaleka and Dzaleka North datasets were introduced to each setup.

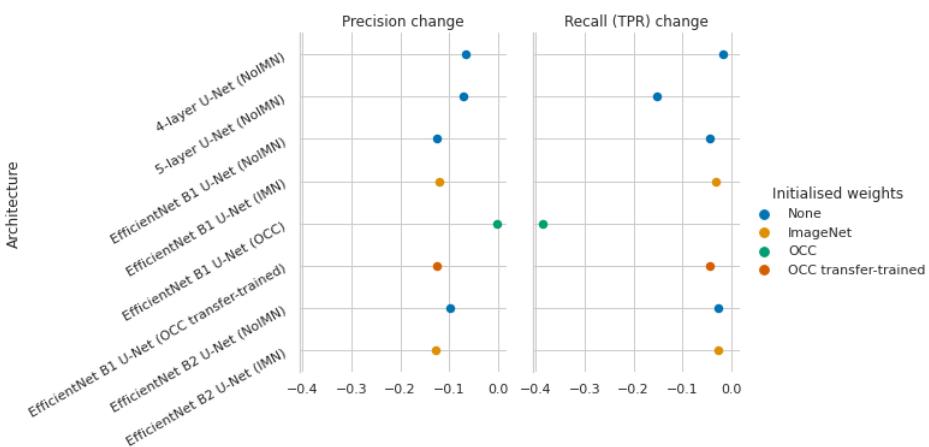


Figure 4.4: Detailed strip plot for *Precision* and *Recall* change in relation to dataset input change.

With the Kalobeyei dataset as constant, the introduction of the Dzaleka and the Dzaleka North dataset have resulted in the reduction in *Precision* and *Recall* for all architectures with any or no initialised weights. Table 4.2 might suggest that the least reduction in *Precision* came from the *EfficientNet B1 U-Net* initialised on OCC building segmentation weights. However figures 4.1 and 4.2 informs that with such poor Dice and IoU score, it reflects that the OCC competition winning network being either very confident at the segmentation or completing missing the other buildings. Thus the *Precision* diverge from the *Recall* results and the statistics (*see figure 4.4*) suggests prediction results with high *False Negative* and therefore does not reflect overall performance. The *5-layer U-Net* had a much more corresponding between *Precision* and *Recall* which shows the metrics are least affected by the introduction of the Dzaleka camps dataset. However, it does not seem to be the case that deeper or shallower version of the architectures more or less reduction, therefore it is difficult to draw any conclusion here.

Initialised weight Precision and Recall change

Pre-initialised weights Precision and Recall change				
Architecture	Weights changed	Dataset input	Precision change	Recall change
EfficientNet B1 U-Net	None to ImageNet	KBY	+0.003	+0.008
EfficientNet B1 U-Net	None to ImageNet	KBY + DZK + DZKN	+0.009	+0.0197
EfficientNet B1 U-Net (5-layer)	OCC to OCC transfer-trained	KBY	0	+0.306
EfficientNet B1 U-Net (5-layer)	OCC to OCC transfer-trained	KBY + DZK + DZKN	-0.122	+0.649
EfficientNet B2 U-Net	None to ImageNet	KBY	+0.009	+0.014
EfficientNet B2 U-Net	None to ImageNet	KBY + DZK + DZKN	-0.02	+0.012

Table 4.3: Initialised weight change in available CNNs and their effects on the metrics

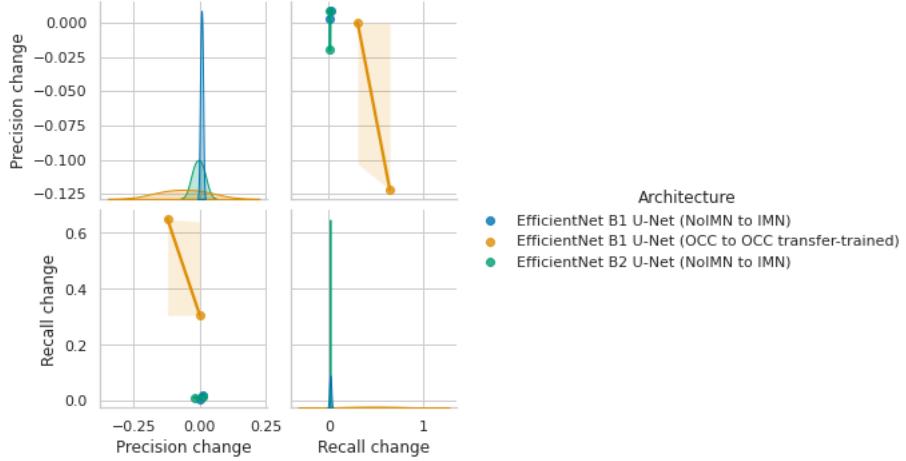


Figure 4.5: Regression plot for *Precision* and *Recall* change in relation to architectures' initialised weight change.

As mentioned previously in section 3.2 that CNNs trained on pre-initialised weights might have significant advantages in performance. Therefore, one might expect that although the OCC model suffers from low *Recall* and high *False Negativity* in it's segmentation output, perhaps further training on the weighted network would result in drastic improvement. Table 4.3 indicates that this was indeed the result, with *EfficientNet B1 U-Net OCC to OCC transfer-trained* achieving the highest *Recall* change, it however also caused the highest decrease in *Precision*, this trend is less significant in the version only trained in the Kalobeyei dataset, but the result reflects the assumption.. This suggest that transfer training from the OCC model compensated for the *False Negative* issue, the improvement in *True Positive* segmentation is not as significant. Meanwhile, the *EfficientNet B1 U-Net* initialised from ImageNet weights saw both improvement in the metrics but not the *EfficientNet B2 U-Net*.

Few assumptions could be drawn from the above results. Firstly, depth increase in architecture tend to favour improvement in *Precision* meaning that deeper networks redyce the classification of *False Positive*, meanwhile, ImageNet initialised weights in most setting tend to favour imrpovement in *Recall* which reduce *False Negative*. These

are useful generalisation for future experiment and especially for when tuning any architectures. In general, introduction of the complex Dzaleka camps datasets cause all architectures to perform worst, but no significant conclusion can be drawn whether the introduction of deeper version of the architecture or initialised weights in tandem with dataset introduction would reduce the rate of *Precision* or *Recall* decrease. Finally a point of contention remains in the human error when labelling. Particularly for the Dzaleka dataset, there are many instances that could cause a contribution to a *False Positive* in the prediction output, which in reality were *True Positive* see figure 4.6. These ambiguity often arises at the courtyard of a particular building or when multiple buildings are interconnected, this might suggest that networks trained on all datasets (KBY + DZK + DZKN) might be achieving higher *Precision* than displayed.

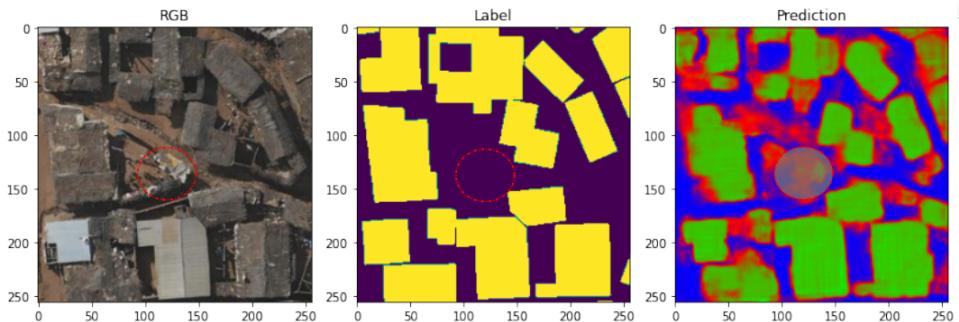


Figure 4.6: Ambiguity which arise from labelling could cause a *True Positive* prediction to be classified as *False Positive*.

Conclusion

The beginning of a DL project is a momentous task. Errors from the data pre-processing to architecture selection could be costly in both time and resources, especially in the setting of humanitarian NGOs (Private Communication, 2022). It is important for a pilot project to therefore uncover the possibilities and challenges with well-designed, small-scale yet rigorous experiments. This study presented a series of experiments which tested variations of the U-Nets on the shallow-end of the spectrum, it also explored the possibility of transfer-training from a previous competition winning neural network and how they compared against networks trained from scratch. Initially, there was an assumption that transfer-training from pre-trained networks and deeper architectures would perform better. However, results shows that the overall picture is a lot more complicated, where they may experience drastic improvement in some metrics, but not others. Furthermore, focusing on the *True Positive* centric class-based accuracy assessment metrics have shown that even performance in *Precision & Recall* does not necessarily corroborate with each other and that there's nuance relationship between their improvement, architectural depths, and pre-trained weights.

Albeit many ambiguities and questions remain, there are several key takeaways that have surfaced as a result. First, transferring a competition winning network which scored very well in the IoU metrics does not necessarily guarantee easy transfer and good performance in new environments. This study hinted that the OCC model may have become too customised for its original dataset. Secondly, it is important to carefully and crit-

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ically evaluate the segmentation output by examining more granular low-level metrics. Thirdly, rudimentary conclusion can be drawn from the depth-wise and weight-wise changes. Unfortunately, the results for how depth and weight change influence performance when complex Dzaleka camps datasets were introduced remained inconclusive. Thus, it is important that future studies could address this. However, It is speculated that this might scale differently and at a more predictable way when higher batch-size, much deeper network, and when significantly more data can be provided.

To narrow down the choices, further investigation will be needed. Scaling from the experimental framework defined for this study could be a good strategy for succession. This will allow for a well-constrained extension of this study. Additionally, baseline experiment at different hyperparameters, where the parameters of isolation are the initialised weights and architectures would be very interesting. Nevertheless, scaling will only be possible with significantly more computational and data resources.

In conclusion, this study provided a pilot baseline understanding of how HOT could begin their open-sourced AI-assisted mapping initiative. The study defined a rigourous experiment and assessment methods which is scalable. With increasing data availability from the OpenAerialMap initiative, this study hope to have made a foundational contribution to a beginning of a much larger study. Perhaps a prequel to which will culminate into an open-sourced AI-assisted mapping tool that could help reduce the geospatial data-inequality in the HOT and OpenStreetMap ecosystem.

Bibliography

- Ahmed, N., Mahbub, R.B., Rahman, R.M., 2020. Learning to extract buildings from ultra-high-resolution drone images and noisy labels. International Journal of Remote Sensing 41, 8216–8237. <https://doi.org/10.1080/01431161.2020.1763496>
- Alix-Garcia, J., Walker, S., Bartlett, A., Onder, H., Sanghi, A., 2018. Do refugee camps help or hurt hosts? The case of Kakuma, Kenya. Journal of Development Economics 130, 66–83. <https://doi.org/10.1016/j.jdeveco.2017.09.005>
- Anderson, J., Sarkar, D., Palen, L., 2019. Corporate Editors in the Evolving Landscape of OpenStreetMap. ISPRS International Journal of Geo-Information 8, 232. <https://doi.org/10.3390/ijgi8050232>
- Audebert, N., Boulch, A., Randrianarivo, H., Le Saux, B., Ferecatu, M., Lefèvre, S., Marlet, R., 2017. Deep learning for urban remote sensing, in: 2017 Joint Urban Remote Sensing Event (JURSE). Presented at the 2017 Joint Urban Remote Sensing Event (JURSE), pp. 1–4. <https://doi.org/10.1109/JURSE.2017.7924536>
- Azimi, S.M., Kiefl, R., Gstaiger, V., Bahmanyar, R., Merkle, N., Henry, C., Rosenbaum, D., Kurz, F., 2021. AUTOMATIC OBJECT SEGMENTATION TO SUPPORT CRISIS MANAGEMENT OF LARGE-SCALE EVENTS, in: The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences. Presented at the XXIV ISPRS Congress „Imaging today, foreseeing tomorrow“, Commission II - 2021 edition, 5–9 July 2021, Copernicus GmbH, pp. 433–440. <https://doi.org/10.5194/isprs-archives-XLIII-B2-2021-433-2021>
- Bengio, Y., 2012. Practical recommendations for gradient-based training of deep archi-

CHAPTER 6. BIBLIOGRAPHY

- tectures. <https://doi.org/10.48550/arXiv.1206.5533>
- Bengio, Y., Goodfellow, I., Courville, A., 2017. Deep learning. MIT press Cambridge, MA, USA.
- Bischl, B., Binder, M., Lang, M., Pielok, T., Richter, J., Coors, S., Thomas, J., Ullmann, T., Becker, M., Boulesteix, A.-L., Deng, D., Lindauer, M., 2021. Hyperparameter Optimization: Foundations, Algorithms, Best Practices and Open Challenges. arXiv:2107.05847 [cs, stat].
- Blaschke, T., 2010. Object based image analysis for remote sensing. ISPRS Journal of Photogrammetry and Remote Sensing 65, 2–16. <https://doi.org/10.1016/j.isprsjprs.2009.06.004>
- Blaschke, T., Hay, G.J., Kelly, M., Lang, S., Hofmann, P., Addink, E., Queiroz Feitosa, R., van der Meer, F., van der Werff, H., van Coillie, F., Tiede, D., 2014. Geographic Object-Based Image Analysis – Towards a new paradigm. ISPRS Journal of Photogrammetry and Remote Sensing 87, 180–191. <https://doi.org/10.1016/j.isprsjprs.2013.09.014>
- Bolstad, P., 2019. GIS fundamentals: A first text on geographic information systems. Eider (PressMinnesota).
- Bruno, G., Antonelli, D., Stadnicka, D., 2021. Evaluating the effect of learning rate, batch size and assignment strategies on the production performance. Journal of Industrial and Production Engineering 38, 137–147. <https://doi.org/10.1080/21681015.2021.1883133>
- Carrivick, J.L., Smith, M.W., Quincey, D.J., 2016. Structure from Motion in the Geosciences. John Wiley Sons.
- Chen, Z., Scott, T.R., Bearman, S., Anand, H., Keating, D., Scott, C., Arrowsmith, J.R., Das, J., 2020. Geomorphological Analysis Using Unpiloted Aircraft Systems, Structure from Motion, and Deep Learning, in: 2020 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS). Presented at the 2020 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), pp. 1276–1283. <https://doi.org/10.1109/IROS45743.2020.9341354>
- Cities Alliance, AfDB, 2022. Dynamics of Systems of Secondary Cities in Africa. Brussels.
- Congalton, R.G., Green, K., 2019. Assessing the accuracy of remotely sensed data:

CHAPTER 6. BIBLIOGRAPHY

- principles and practices, 3rd ed. CRC press.
- CS231n Convolutional Neural Networks for Visual Recognition [WWW Document], n.d. URL <https://cs231n.github.io/convolutional-networks/> (accessed 7.4.22).
- DrivenData, n.d. Open Cities AI Challenge: Segmenting Buildings for Disaster Resilience [WWW Document]. DrivenData. URL <https://www.drivendata.org/competitions/60/building-segmentation-disaster-resilience/page/218/> (accessed 5.11.22).
- Elsken, T., Metzen, J.H., Hutter, F., 2019. Neural architecture search: A survey. *The Journal of Machine Learning Research* 20, 1997–2017.
- Gevaert, C.M., Sliuzas, R., Persello, C., Vosselman, G., 2018. Evaluating the Societal Impact of Using Drones to Support Urban Upgrading Projects. *ISPRS International Journal of Geo-Information* 7, 91. <https://doi.org/10.3390/ijgi7030091>
- Gross, G., n.d. Dzaleka Refugee Camp Extension – Werner Schellenberg. URL <http://werner-schellenberg.de/dzaleka-refugee-camp-extension> (accessed 6.17.22).
- He, F., Liu, T., Tao, D., 2019. Control Batch Size and Learning Rate to Generalize Well: Theoretical and Empirical Evidence, in: *Advances in Neural Information Processing Systems*. Curran Associates, Inc.
- He, K., Gkioxari, G., Dollár, P., Girshick, R., 2018. Mask R-CNN. arXiv:1703.06870 [cs].
- Herfort, B., Lautenbach, S., de Albuquerque, J.P., Anderson, J., Zipf, A., 2021. The evolution of humanitarian mapping within the OpenStreetMap community. *Scientific reports* 11, 1–15.
- Herfort, B., Li, H., Fendrich, S., Lautenbach, S., Zipf, A., 2019. Mapping Human Settlements with Higher Accuracy and Less Volunteer Efforts by Combining Crowdsourcing and Deep Learning. *Remote Sensing* 11, 1799. <https://doi.org/10.3390/rs11151799>
- Hoeser, T., Bachofer, F., Kuenzer, C., 2020. Object detection and image segmentation with deep learning on Earth observation data: A review—Part II: Applications. *Remote Sensing* 12, 3053.
- Hoeser, T., Kuenzer, C., 2020. Object detection and image segmentation with deep learning on earth observation data: A review-part i: Evolution and recent trends. Re-

CHAPTER 6. BIBLIOGRAPHY

- mote Sensing 12, 1667.
- Hofmann, P., Taubenböck, H., Werthmann, C., 2015. Monitoring and modelling of informal settlements - A review on recent developments and challenges, in: 2015 Joint Urban Remote Sensing Event (JURSE). Presented at the 2015 Joint Urban Remote Sensing Event (JURSE), pp. 1–4. <https://doi.org/10.1109/JURSE.2015.7120513>
- Hopfield, J.J., 1982. Neural networks and physical systems with emergent collective computational abilities. *PNAS* 79, 2554–2558. <https://doi.org/10.1073/pnas.79.8.2554>
- HOTOSM, 2021. Annual Report. HOTOSM, Washington D. C.
- Hovil, L., Maple, N., 2022. Local Integration: A Durable Solution in need of Restoration? *Refugee Survey Quarterly* 41, 238–266. <https://doi.org/10.1093/rsq/hdac008>
- Howard, J., Gugger, S., 2020. Deep Learning for Coders with fastai and PyTorch. O'Reilly Media.
- IFC, 2018. Kakuma as a marketplace: a consumer and market study of a refugee camp and town in northwest Kenya (No. 125918). World Bank, Washington D. C.
- Jean, N., Burke, M., Xie, M., Davis, W.M., Lobell, D.B., Ermon, S., 2016. Combining satellite imagery and machine learning to predict poverty. *Science* 353, 790–794. <https://doi.org/10.1126/science.aaf7894>
- Kavalou, E.B., 2016. Environmental and socio-economic impact of hosting refugees: a case study of villages around the Dzaleka refugee camp in Dowa district, Malawi (Master of Science). University of South Africa, Pretoria.
- Kingma, D.P., Ba, J., 2017. Adam: A Method for Stochastic Optimization. arXiv:1412.6980 [cs].
- Kinsley, H., Kukielka, D., 2020. Neural Networks from Scratch in Python. Harrison Kinsley.
- Krizhevsky, A., Sutskever, I., Hinton, G.E., 2012. ImageNet Classification with Deep Convolutional Neural Networks, in: Advances in Neural Information Processing Systems. Curran Associates, Inc.
- Kuffer, M., Barros, J., Sliuzas, R.V., 2014. The development of a morphological unplanned settlement index using very-high-resolution (VHR) imagery. *Computers, Envi-*

CHAPTER 6. BIBLIOGRAPHY

- ronment and Urban Systems 48, 138–152. <https://doi.org/10.1016/j.compenvurbsys.2014.07.012>
- Kuffer, M., Grippa, T., Persello, C., Taubenböck, H., Pfeffer, K., Sliuzas, R., 2021. Mapping the Morphology of Urban Deprivation, in: *Urban Remote Sensing*. John Wiley Sons, Ltd, pp. 305–323. <https://doi.org/10.1002/9781119625865.ch14>
- Kuffer, M., Pfeffer, K., Sliuzas, R., 2016a. Slums from Space—15 Years of Slum Mapping Using Remote Sensing. *Remote Sensing* 8, 455. <https://doi.org/10.3390/rs8060455>
- Kuffer, M., Pfeffer, K., Sliuzas, R., Baud, I., 2016b. Extraction of Slum Areas From VHR Imagery Using GLCM Variance. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing* 9, 1830–1840. <https://doi.org/10.1109/JSTARS.2016.2538563>
- Kuhn, T.S., 1962. *The Structure of Scientific Revolutions*, 2nd ed, International International Encyclopedia of Unified Science. The University of Chicago Press, London.
- Lai, F., Sharma, A., Liu, X., Yang, X., 2021. Deep Learning for Urban and Landscape Mapping from Remotely Sensed Imagery, in: *Urban Remote Sensing*. John Wiley Sons, Ltd, pp. 153–174. <https://doi.org/10.1002/9781119625865.ch8>
- Lang, S., Füreder, P., Riedler, B., Wendt, L., Braun, A., Tiede, D., Schoepfer, E., Zeil, P., Spröhnle, K., Kulessa, K., Rogenhofer, E., Bäuerl, M., Öze, A., Schwendemann, G., Hochschild, V., 2020. Earth observation tools and services to increase the effectiveness of humanitarian assistance. *European Journal of Remote Sensing* 53, 67–85. <https://doi.org/10.1080/22797254.2019.1684208>
- Lang, S., Hay, G.J., Baraldi, A., Tiede, D., Blaschke, T., 2019. GEOBIA Achievements and Spatial Opportunities in the Era of Big Earth Observation Data. *ISPRS International Journal of Geo-Information* 8, 474. <https://doi.org/10.3390/ijgi8110474>
- Lang, S., Wendt, L., Tiede, D., Gao, Y., Streifender, V., Zafar, H., Adebayo, A., Schwendemann, G., Jeremias, P., n.d. Multi-Feature Sample Database for Enhancing Deep Learning Tasks in Operational Humanitarian Applications. *GI_Forum 2021*, 9, 209–219.
- LeCun, Y., Bengio, Y., Hinton, G., 2015. Deep learning. *Nature* 521, 436–444. <https://doi.org/10.1038/nature14539>
- Leonita, G., Kuffer, M., Sliuzas, R., Persello, C., 2018. Machine Learning-Based Slum Mapping in Support of Slum Upgrading Programs: The Case of Bandung City, Indonesia. *Remote Sensing* 10, 1522. <https://doi.org/10.3390/rs10101522>

CHAPTER 6. BIBLIOGRAPHY

- Ma, L., Liu, Y., Zhang, X., Ye, Y., Yin, G., Johnson, B.A., 2019. Deep learning in remote sensing applications: A meta-analysis and review. *ISPRS journal of photogrammetry and remote sensing* 152, 166–177.
- Marmanis, D., Datcu, M., Esch, T., Stilla, U., 2016. Deep Learning Earth Observation Classification Using ImageNet Pretrained Networks. *IEEE Geoscience and Remote Sensing Letters* 13, 105–109. <https://doi.org/10.1109/LGRS.2015.2499239>
- Minghini, M., Ludwig, C., Anderson, J., Mooney, P., Grinberger, A.Y., 2021. Proceedings of the Academic Track at State of the Map 2021. Zenodo, online. <https://doi.org/10.5281/zenodo.51>
- National Research Council, 1998. People and pixels: Linking remote sensing and social science. National Academies Press.
- Ng, A., 2018. Machine Learning Yearning.
- Nielsen, M.A., 2015. Neural Networks and Deep Learning. Determination Press.
- Pal, N.R., Pal, S.K., 1993. A review on image segmentation techniques. *Pattern Recognition* 26, 1277–1294. [https://doi.org/10.1016/0031-3203\(93\)90135-J](https://doi.org/10.1016/0031-3203(93)90135-J)
- Perez, L., Wang, J., 2017. The Effectiveness of Data Augmentation in Image Classification using Deep Learning. *arXiv:1712.04621 [cs]*.
- Quinn, J.A., Nyhan, M.M., Navarro, C., Coluccia, D., Bromley, L., Luengo-Oroz, M., 2018. Humanitarian applications of machine learning with remote-sensing data: review and case study in refugee settlement mapping. *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences* 376, 20170363. <https://doi.org/10.1098/rsta.2017.0363>
- Ren, S., He, K., Girshick, R., Sun, J., 2016. Faster R-CNN: Towards Real-Time Object Detection with Region Proposal Networks. *arXiv:1506.01497 [cs]*.
- Ronneberger, O., Fischer, P., Brox, T., 2015. U-Net: Convolutional Networks for Biomedical Image Segmentation (No. arXiv:1505.04597). *arXiv*. <https://doi.org/10.48550/arXiv.1505.04597>
- Rosenblatt, F., 1958. The perceptron: A probabilistic model for information storage and organization in the brain. *Psychological Review* 65, 386–408. <https://doi.org/10.1037/h0042519>
- Rumelhart, D.E., Hinton, G.E., Williams, R.J., 1986. Learning representations by back-propagating errors. *Nature* 323, 533–536. <https://doi.org/10.1038/323533a0>

CHAPTER 6. BIBLIOGRAPHY

- Rummery, A., n.d. Why including refugees makes economic sense [WWW Document]. UNHCR. URL <https://www.unhcr.org/news/stories/2019/4/5c9caee84/including-refugees-makes-economic-sense.html> (accessed 6.4.22).
- Shorten, C., Khoshgoftaar, T.M., 2019. A survey on Image Data Augmentation for Deep Learning. *J Big Data* 6, 60. <https://doi.org/10.1186/s40537-019-0197-0>
- Simonyan, K., Vedaldi, A., Zisserman, A., 2014. Deep Inside Convolutional Networks: Visualising Image Classification Models and Saliency Maps. *arXiv:1312.6034* [cs].
- Sirko, W., Kashubin, S., Ritter, M., Annkah, A., Bouchareb, Y.S.E., Dauphin, Y., Keyzers, D., Neumann, M., Cisse, M., Quinn, J., 2021. Continental-Scale Building Detection from High Resolution Satellite Imagery. *arXiv:2107.12283* [cs].
- Sliuzas, R., Kuffer, M., Gevaert, C., Persello, C., Pfeffer, K., 2017. Slum mapping, in: 2017 Joint Urban Remote Sensing Event (JURSE). Presented at the 2017 Joint Urban Remote Sensing Event (JURSE), pp. 1–4. <https://doi.org/10.1109/JURSE.2017.7924589>
- Smith, L.N., 2018. A disciplined approach to neural network hyper-parameters: Part 1 – learning rate, batch size, momentum, and weight decay. *arXiv:1803.09820* [cs, stat].
- Smith, M.W., Carrivick, J.L., Quincey, D.J., 2016. Structure from motion photogrammetry in physical geography. *Progress in Physical Geography: Earth and Environment* 40, 247–275. <https://doi.org/10.1177/0309133315615805>
- Stevens, E., Antiga, L., Viehmann, T., 2020. Deep learning with PyTorch. Manning Publications.
- Tan, C., Sun, F., Kong, T., Zhang, W., Yang, C., Liu, C., 2018. A Survey on Deep Transfer Learning, in: Kůrková, V., Manolopoulos, Y., Hammer, B., Iliadis, L., Maglogiannis, I. (Eds.), *Artificial Neural Networks and Machine Learning – ICANN 2018*, Lecture Notes in Computer Science. Springer International Publishing, Cham, pp. 270–279. https://doi.org/10.1007/978-3-030-01424-7_27
- Tan, M., Le, Q.V., 2020. EfficientNet: Rethinking Model Scaling for Convolutional Neural Networks. *arXiv:1905.11946* [cs, stat].
- Taubenböck, H., Kraff, N.J., Wurm, M., 2018. The morphology of the Arrival City - A global categorization based on literature surveys and remotely sensed data. *Applied*

CHAPTER 6. BIBLIOGRAPHY

- Geography 92, 150–167. <https://doi.org/10.1016/j.apgeog.2018.02.002>
- Taubenbock, H., Wurm, M., Setiadi, N., Gebert, N., Roth, A., Strunz, G., Birkmann, J., Dech, S., 2009. Integrating remote sensing and social science, in: 2009 Joint Urban Remote Sensing Event. Presented at the 2009 Joint Urban Remote Sensing Event, pp. 1–7. <https://doi.org/10.1109/URS.2009.5137506>
- Turner, S., 2016. What Is a Refugee Camp? Explorations of the Limits and Effects of the Camp. *Journal of Refugee Studies* 29, 139–148. <https://doi.org/10.1093/jrs/fev024>
- UN, 2015. Transforming Our World: THe 2030 Agenda for Sustainable Development (No. A/RES/70/1). United Nations.
- UN DESA, 2019. World Urbanization Prospect: The 2018 Revision (No. ST/ESA/SER.A/420). UN DESA, New York.
- UNDS, 2021. The Africa Regional UN Development System Report 2020. The Africa Regional United Nations Development System.
- UN-HABITAT, 2021. Kakuma and Kalobeyei Spatial Profile. UN-HABITAT, Nairobi.
- UNHCR, 2021. Global Compact on Refugees Indicator Report 2021.
- UNHCR, 2014. Malawi: Joint Assessment Mission Report. Dzaleka Refugee Camp (November 2014) (No. WFP/UNHCR/GOM/PRDO/JRS/PLAN). UNHCR, Lilongwe, Malawi.
- UNHCR, DANIDA, 2019. The Integrated Solutions Model in and Around Kalobeyei, Turkana, Kenya (No. 978-87-93760-22-6). UNHCR, DANIDA, Copenhagen.
- United Nations, 2018. Global Compact on Refugees.
- Vakalopoulou, M., Karantzalos, K., Komodakis, N., Paragios, N., 2015. Building detection in very high resolution multispectral data with deep learning features, in: 2015 IEEE International Geoscience and Remote Sensing Symposium (IGARSS). Presented at the 2015 IEEE International Geoscience and Remote Sensing Symposium (IGARSS), pp. 1873–1876. <https://doi.org/10.1109/IGARSS.2015.7326158>
- Venables, A.J., 2018. Urbanisation in Developing Economies: building cities that work. 1 5, 91–100. <https://doi.org/10.18335/region.v5i1.245>
- Wegmann, M., Leutner, B., Dech, S., 2016. Remote sensing and GIS for ecologists:

CHAPTER 6. BIBLIOGRAPHY

using open source software. Pelagic Publishing Ltd.

Wurm, M., Stark, T., Zhu, X.X., Weigand, M., Taubenböck, H., 2019. Semantic segmentation of slums in satellite images using transfer learning on fully convolutional neural networks. *ISPRS Journal of Photogrammetry and Remote Sensing* 150, 59–69. <https://doi.org/10.1016/j.isprsjprs.2019.02.006>

Wurm, M., Weigand, M., Schmitt, A., Geiß, C., Taubenböck, H., 2017. Exploitation of textural and morphological image features in Sentinel-2A data for slum mapping, in: 2017 Joint Urban Remote Sensing Event (JURSE). Presented at the 2017 Joint Urban Remote Sensing Event (JURSE), pp. 1–4. <https://doi.org/10.1109/JURSE.2017.7924586>

Xu, Y., Wu, L., Xie, Z., Chen, Z., 2018. Building Extraction in Very High Resolution Remote Sensing Imagery Using Deep Learning and Guided Filters. *Remote Sensing* 10, 144. <https://doi.org/10.3390/rs10010144>

Yakubovskiy, P., 2021. Welcome to Segmentation Models's documentation! — Segmentation Models documentation [WWW Document]. URL <https://segmentation-models-pytorch.readthedocs.io/en/latest/index.html> (accessed 7.26.22).

Yan-Chak Chan, C., Weigand, M., Alnajar, E.A., Taubenböck, H., 2022. Investigating the capability of UAV imagery for AI-assisted mapping of Refugee Camps in East Africa, in: Proceedings of the Academic Track at State of the Map 2022. Presented at the State of the Map 2022 (SotM 2022), Zenodo, Florence, Italy, p. 45. <https://doi.org/10.5281/zenodo.7004576>

Yang, A., Fan, H., Jing, N., Sun, Y., Zipf, A., 2016. Temporal Analysis on Contribution Inequality in OpenStreetMap: A Comparative Study for Four Countries. *ISPRS International Journal of Geo-Information* 5, 5. <https://doi.org/10.3390/ijgi5010005>

Yu, T., Zhu, H., 2020. Hyper-Parameter Optimization: A Review of Algorithms and Applications. arXiv:2003.05689 [cs, stat].

Zhang, Liangpei, Zhang, Lefei, Du, B., 2016. Deep learning for remote sensing data: A technical tutorial on the state of the art. *IEEE Geoscience and remote sensing magazine* 4, 22–40.

Zhao, W., Ivanov, I., Persello, C., Stein, A., 2020. Building Outline Delineation: From

CHAPTER 6. BIBLIOGRAPHY

- Very High Resolution Remote Sensing Imagery to Polygons with an Improved End-to-End Learning Framework. *The International Archives of Photogrammetry, Remote Sensing and Spatial Information Sciences* 43, 731–735.
- Zhu, X.X., Tuia, D., Mou, L., Xia, G.-S., Zhang, L., Xu, F., Fraundorfer, F., 2017. Deep Learning in Remote Sensing: A Comprehensive Review and List of Resources. *IEEE Geoscience and Remote Sensing Magazine* 5, 8–36. <https://doi.org/10.1109/MGRS.2017.2762307>
- Zoph, B., Cubuk, E.D., Ghiasi, G., Lin, T.-Y., Shlens, J., Le, Q.V., 2020. Learning Data Augmentation Strategies for Object Detection, in: Vedaldi, A., Bischof, H., Brox, T., Frahm, J.-M. (Eds.), *Computer Vision – ECCV 2020*, Lecture Notes in Computer Science. Springer International Publishing, Cham, pp. 566–583. https://doi.org/10.1007/978-3-030-58583-9_34

Appendix

Adam optimiser

Algorithm 1: Adam, our proposed algorithm for stochastic optimization. See section 2 for details, and for a slightly more efficient (but less clear) order of computation. g_t^2 indicates the elementwise square $g_t \odot g_t$. Good default settings for the tested machine learning problems are $\alpha = 0.001$, $\beta_1 = 0.9$, $\beta_2 = 0.999$ and $\epsilon = 10^{-8}$. All operations on vectors are element-wise. With β_1^t and β_2^t we denote β_1 and β_2 to the power t .

Require: α : Stepsize
Require: $\beta_1, \beta_2 \in [0, 1]$: Exponential decay rates for the moment estimates
Require: $f(\theta)$: Stochastic objective function with parameters θ
Require: θ_0 : Initial parameter vector

```

 $m_0 \leftarrow 0$  (Initialize 1st moment vector)
 $v_0 \leftarrow 0$  (Initialize 2nd moment vector)
 $t \leftarrow 0$  (Initialize timestep)
while  $\theta_t$  not converged do
     $t \leftarrow t + 1$ 
     $g_t \leftarrow \nabla_{\theta} f_t(\theta_{t-1})$  (Get gradients w.r.t. stochastic objective at timestep  $t$ )
     $m_t \leftarrow \beta_1 \cdot m_{t-1} + (1 - \beta_1) \cdot g_t$  (Update biased first moment estimate)
     $v_t \leftarrow \beta_2 \cdot v_{t-1} + (1 - \beta_2) \cdot g_t^2$  (Update biased second raw moment estimate)
     $\hat{m}_t \leftarrow m_t / (1 - \beta_1^t)$  (Compute bias-corrected first moment estimate)
     $\hat{v}_t \leftarrow v_t / (1 - \beta_2^t)$  (Compute bias-corrected second raw moment estimate)
     $\theta_t \leftarrow \theta_{t-1} - \alpha \cdot \hat{m}_t / (\sqrt{\hat{v}_t} + \epsilon)$  (Update parameters)
end while
return  $\theta_t$  (Resulting parameters)

```



Figure 7.1: The algorithm of Adam (Kingma & Ba., 2017).

EfficientNet

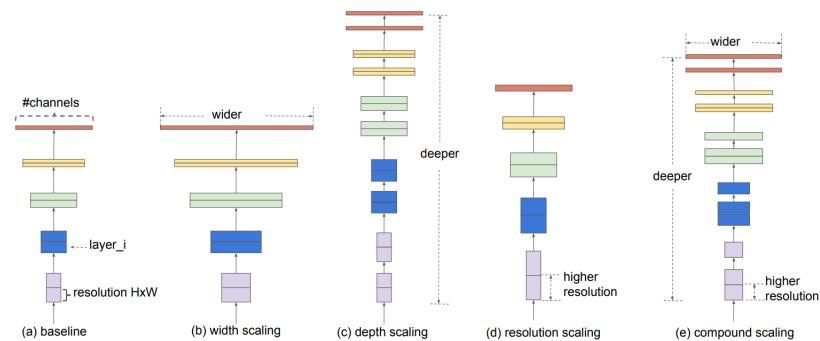


Figure 7.2: Compound scaling of the EfficientNet (Tan & Le, 2020)

Experiment data

[Kalobeyei] 4-layer U-Net

	id	png	Dice_score	True_Positive	True_Negative	False_Negative	F1
0	0	KBY15_IMG_29925-23256.png	0.8728103	573	64796	63	104
1	1	KBY15_IMG_3078-14535.png	0.8851675	7955	55517	192	1872
2	2	KBY15_IMG_11286-9747.png	0.929342	5169	59581	362	424
3	3	KBY15_IMG_3933-13509.png	0.95330346	11810	52569	231	926
4	4	KBY15_IMG_19836-15732.png	0.9325513	954	64444	111	27
5	5	KBY15_IMG_30780-24282.png	0.9402606	8696	55735	421	684
6	6	KBY15_IMG_4104-13167.png	0.93620735	2150	63093	133	160
7	7	KBY15_IMG_7182-9918.png	0.9174392	5245	59347	84	860
8	8	KBY15_IMG_7524-9405.png	0.82926834	17	65512	3	4
9	9	KBY15_IMG_9747-4104.png	0.8745642	5644	58273	2	1617
10	10	KBY15_IMG_29583-12483.png	0.7982646	184	65259	70	23
11	11	KBY15_IMG_12825-7695.png	0.95668435	3324	61911	48	253
12	12	KBY15_IMG_14877-22743.png	0.939298	3412	61683	81	360
13	13	KBY15_IMG_14193-3249.png	0.9411239	7361	57254	73	848
14	14	KBY15_IMG_20178-22914.png	0.94972825	4194	60898	366	78
15	15	KBY15_IMG_8037-16416.png	0.9750745	6220	58998	23	295
16	16	KBY15_IMG_19836-15903.png	0.8875502	221	65259	36	20
17	17	KBY15_IMG_23256-18810.png	0.9188235	6763	57578	883	312
18	18	KBY15_IMG_20520-23085.png	0.623991	2783	59399	282	3072
19	19	KBY15_IMG_12483-21717.png	0.919695	16045	46689	1786	1016
20	20	KBY15_IMG_10602-3762.png	0.8630303	3560	60846	739	391
21	21	KBY15_IMG_32661-24282.png	nan	0	65513	23	0
22	22	KBY15_IMG_30096-12654.png	0.77773356	6839	54788	1673	2236
23	23	KBY15_IMG_27702-27189.png	0.5515555	1241	62277	11	2007
24	24	KBY15_IMG_28557-24111.png	0.9518834	1731	63630	38	137

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		id	png	Dice_score	True_Positive	True_Negative	False_Negat
25	25	KBY15_IMG_13509-22401.png	0.88172257	4320	60057	5	1154 0.7891
26	26	KBY15_IMG_7011-10431.png	0.6832078	771	64050	29	686 0.5291
27	27	KBY15_IMG_14535-22914.png	0.91177183	15088	47528	18	2902 0.8386
28	28	KBY15_IMG_7524-17271.png	0.9201697	1193	64136	138	69 0.9453
29	29	KBY15_IMG_7695-15903.png	0.95589924	5007	60067	3	459 0.9160
30	30	KBY15_IMG_15048-2223.png	0.9539175	10288	54254	123	871 0.9219
31	31	KBY15_IMG_11970-3762.png	0.9568822	10619	53960	383	574 0.9487
32	32	KBY15_IMG_30438-24111.png	0.95407796	3989	61163	97	287 0.9328
33	33	KBY15_IMG_19836-16416.png	0.91812706	1755	63468	120	193 0.9009
34	34	KBY15_IMG_13680-22401.png	0.9455363	7361	57327	42	806 0.9013
35	35	KBY15_IMG_23085-9234.png	0.95317847	2504	62786	72	174 0.9350
36	36	KBY15_IMG_22743-9576.png	0.93401796	3638	61384	59	455 0.8888
37	37	KBY15_IMG_10773-3420.png	0.8598167	4502	59566	455	1013 0.8163
38	38	KBY15_IMG_13680-20520.png	0.9635036	792	64684	16	44 0.9473
39	39	KBY15_IMG_20007-23598.png	0.83367527	4877	58713	313	1633 0.7491
40	40	KBY15_IMG_10773-2907.png	nan	0	65534	2	0 nan
41	41	KBY15_IMG_7011-16245.png	0.94752014	6247	58597	250	442 0.9339
42	42	KBY15_IMG_7011-9918.png	0.9608495	16468	47726	440	902 0.9480
43	43	KBY15_IMG_3591-14877.png	0.9120821	2578	62461	454	43 0.9835
44	44	KBY15_IMG_3078-16929.png	0.42408824	1250	60891	182	3213 0.2800
45	45	KBY15_IMG_3249-14706.png	0.9492754	262	65246	15	13 0.9527
46	46	KBY15_IMG_14877-3420.png	0.9395823	12169	51802	277	1288 0.9042
47	47	KBY15_IMG_23256-18468.png	0.95031023	16849	46925	522	1240 0.9314
48	48	KBY15_IMG_7353-16929.png	0.71872544	5030	56569	11	3926 0.5616
49	49	KBY15_IMG_6669-16587.png	0.94023	6253	58488	262	533 0.9214
50	50	KBY15_IMG_19836-16074.png	0.94213736	7555	57053	184	744 0.9103
51	51	KBY15_IMG_14877-2394.png	0.9378349	7875	56617	395	649 0.9238
52	52	KBY15_IMG_12996-7353.png	0.9567558	2843	62436	131	126 0.9575

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative	False_Positive
53	53	KBY15_IMG_14706-23085.png	0.9492575	8437	56197	152	750	0.9183629
54	54	KBY15_IMG_28044-13167.png	0.9148854	4751	59901	18	866	0.8458252
55	55	KBY15_IMG_17955-24453.png	0.937583	1412	63936	85	103	0.9320132
56	56	KBY15_IMG_28215-22059.png	0.92876023	6675	57837	157	867	0.88504374
57	57	KBY15_IMG_27018-15903.png	0.9494695	4519	60536	165	316	0.9346432
58	58	KBY15_IMG_15048-2736.png	0.90915054	6930	57221	3	1382	0.83373433
59	59	KBY15_IMG_7695-10089.png	0.960223	10163	54531	1	841	0.92357326
60	60	KBY15_IMG_12825-21546.png	0.86552465	6063	57589	1268	616	0.90777063
61	61	KBY15_IMG_19665-15903.png	0.5855962	496	64338	99	603	0.45131937
62	62	KBY15_IMG_10431-4617.png	0.9488092	10259	54170	382	725	0.9339949
63	63	KBY15_IMG_11286-4617.png	0.8708088	6272	57403	1025	836	0.882386
64	64	KBY15_IMG_16416-4446.png	0.9430555	4074	60970	272	220	0.9487657
65	65	KBY15_IMG_10602-3078.png	0.8492855	3150	61268	16	1102	0.74082786
66	66	KBY15_IMG_27873-13167.png	0.95408684	5673	59317	97	449	0.926658
67	67	KBY15_IMG_28557-22914.png	0.97179013	1843	63586	57	50	0.9735869
68	68	KBY15_IMG_12825-21204.png	0.9429066	1635	63703	173	25	0.98493975
69	69	KBY15_IMG_7182-16587.png	0.9277471	7396	56988	273	879	0.8937764
70	70	KBY15_IMG_30267-12825.png	0.9753051	10229	54789	135	383	0.9639088
71	71	KBY15_IMG_10944-4959.png	0.9738103	13107	51724	66	639	0.95351374
72	72	KBY15_IMG_29241-23769.png	0.40186915	43	65365	128	0	1.0
73	73	KBY15_IMG_15219-2052.png	0.9208958	6723	57658	195	960	0.8750488
74	74	KBY15_IMG_6840-16416.png	0.9215174	7227	57078	14	1217	0.855874
75	75	KBY15_IMG_27873-12996.png	0.8370144	15273	44315	4390	1558	0.90743273
76	76	KBY15_IMG_28728-11970.png	0.93066794	9544	54570	589	833	0.9197263
77	77	KBY15_IMG_29241-22914.png	0.89161503	7050	56772	394	1320	0.8422939
78	78	KBY15_IMG_27702-11457.png	0.8961351	8011	55668	1008	849	0.90417606
79	79	KBY15_IMG_15732-2907.png	0.94820803	4339	60723	34	440	0.90793055
80	80	KBY15_IMG_2565-17613.png	0.92930716	6586	57948	184	818	0.88951916

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		id	png	Dice_score	True_Positive	True_Negative	False_Positive	False_Negative
81	81	KBY15_IMG_23769-19323.png	0.2857143	1	65530	5	0	1.0
82	82	KBY15_IMG_14877-2565.png	0.6497396	998	63462	62	1014	0.49600
83	83	KBY15_IMG_15561-2565.png	nan	0	65328	11	197	0.0
84	84	KBY15_IMG_19836-22743.png	0.5238095	44	65412	80	0	1.0
85	85	KBY15_IMG_2907-14706.png	0.9524941	4411	60685	271	169	0.96310
86	86	KBY15_IMG_9405-5301.png	nan	0	65244	2	290	0.0
87	87	KBY15_IMG_29070-11970.png	0.9455373	11007	53261	10	1258	0.89740
88	88	KBY15_IMG_29412-22914.png	0.93947124	6449	58256	188	643	0.90930
89	89	KBY15_IMG_7524-8550.png	0.6233766	24	65483	29	0	1.0
90	90	KBY15_IMG_13851-22401.png	0.9149388	1721	63495	9	311	0.84690
91	91	KBY15_IMG_17955-24624.png	0.92901164	2035	63190	3	308	0.86850
92	92	KBY15_IMG_14364-22743.png	0.9444872	7367	57303	366	500	0.93640
93	93	KBY15_IMG_30951-21717.png	0.9554867	4937	60139	179	281	0.94610
94	94	KBY15_IMG_31806-22230.png	0.95569634	21949	41552	401	1634	0.93070
95	95	KBY15_IMG_3933-13167.png	0.91945535	1992	63195	9	340	0.85420
96	96	KBY15_IMG_6669-9918.png	0.92607903	2800	62289	14	433	0.86600
97	97	KBY15_IMG_11970-4446.png	0.89196223	2741	62131	12	652	0.80780
98	98	KBY15_IMG_16074-21717.png	0.70475835	1881	62079	480	1096	0.63180
99	99	KBY15_IMG_15390-22743.png	0.94064164	7139	57496	141	760	0.90370
100	100	KBY15_IMG_3762-13509.png	0.3713476	1900	57203	61	6372	0.22960
101	101	KBY15_IMG_14877-22572.png	0.95987755	2823	62477	134	102	0.96510
102	102	KBY15_IMG_3078-17613.png	0.98536706	4074	61341	16	105	0.97480
103	103	KBY15_IMG_12654-21204.png	0.94361484	3665	61433	106	332	0.91690
104	104	KBY15_IMG_10773-10773.png	nan	0	65267	11	258	0.0
105	105	KBY15_IMG_15390-2736.png	nan	0	65516	20	0	nan
106	106	KBY15_IMG_7353-16074.png	0.9414523	6826	57861	538	311	0.95640
107	107	KBY15_IMG_9918-13338.png	0.71536523	852	64006	10	668	0.56050
108	108	KBY15_IMG_13509-22572.png	0.9131075	620	64798	8	110	0.84930

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				Dice_score	True_Positive	True_Negative	False_Negative	False_Positive
109	109	KBY15_IMG_29241-12825.png		0.9570301	1637	63752	40	107
110	110	KBY15_IMG_9918-3762.png		0.8527957	6810	56375	11	2340
111	111	KBY15_IMG_7353-17100.png		0.9406175	594	64867	16	59
112	112	KBY15_IMG_15048-3591.png		0.89077216	473	64947	5	111
113	113	KBY15_IMG_28044-12312.png		0.92786616	3383	61627	36	490
114	114	KBY15_IMG_12825-21888.png		0.9607787	3356	61906	32	242
115	115	KBY15_IMG_30438-23940.png		0.9356368	6905	57681	352	598
116	116	KBY15_IMG_29070-12483.png		0.93527305	2218	63011	237	70
117	117	KBY15_IMG_17955-25650.png		nan	0	65503	33	0
118	118	KBY15_IMG_20349-15561.png		0.96697277	3528	61767	95	146
119	119	KBY15_IMG_12825-10602.png		0.9195904	2739	62318	2	477
120	120	KBY15_IMG_14364-3420.png		0.77779865	2074	62277	11	1174
121	121	KBY15_IMG_29070-12996.png		0.9642266	16024	48323	410	779
122	122	KBY15_IMG_7524-9063.png		0.93968934	21930	40791	84	2731
123	123	KBY15_IMG_32490-23256.png		0.91654944	3910	60914	125	587
124	124	KBY15_IMG_28386-22059.png		0.95887715	3416	61827	36	257
125	125	KBY15_IMG_22914-9405.png		0.92451423	1237	64097	17	185
126	126	KBY15_IMG_27360-27189.png		0.96913034	8759	56219	5	553
127	127	KBY15_IMG_31977-22230.png		0.894486	6570	57416	401	1149
128	128	KBY15_IMG_24624-17955.png		0.94433725	3181	61980	189	186
129	129	KBY15_IMG_13338-21888.png		0.95732737	15861	48261	60	1354
130	130	KBY15_IMG_12996-21375.png		0.6717528	1717	62141	758	920
131	131	KBY15_IMG_28728-11457.png		0.9276049	4113	60781	256	386
132	132	KBY15_IMG_12483-21033.png		0.8841486	3606	60985	81	864
133	133	KBY15_IMG_11115-10773.png		0.9507369	4709	60339	121	367
134	134	KBY15_IMG_11115-4446.png		0.8914373	1166	64086	116	168
135	135	KBY15_IMG_7866-16758.png		0.93687123	6426	58244	4	862

[Kalobeyei] 5-layer U-Net

	id	png	Dice_score	True_Positive	True_Negative	False_Negat
0	0	KBY15_IMG_29925-23256.png	0.90062976	3861	60823	438
1	1	KBY15_IMG_3078-14535.png	0.9744517	6198	59013	45
2	2	KBY15_IMG_11286-9747.png	0.95799536	3307	61939	65
3	3	KBY15_IMG_3933-13509.png	0.69632846	1925	61932	436
4	4	KBY15_IMG_19836-15732.png	0.9617695	3522	61734	101
5	5	KBY15_IMG_30780-24282.png	nan	0	65513	23
6	6	KBY15_IMG_4104-13167.png	0.9214502	2745	62323	8
7	7	KBY15_IMG_7182-9918.png	0.9404672	1248	64130	6
8	8	KBY15_IMG_7524-9405.png	0.950227	16953	46807	418
9	9	KBY15_IMG_9747-4104.png	0.6576402	850	63801	12
10	10	KBY15_IMG_29583-12483.png	0.93921727	1692	63625	116
11	11	KBY15_IMG_12825-7695.png	0.898638	6565	57490	406
12	12	KBY15_IMG_14877-22743.png	0.6645414	2710	60090	355
13	13	KBY15_IMG_14193-3249.png	0.57142854	4	65526	2
14	14	KBY15_IMG_20178-22914.png	0.9411815	11017	53142	0
15	15	KBY15_IMG_8037-16416.png	0.9555068	10233	54350	178
16	16	KBY15_IMG_19836-15903.png	0.89522177	4178	60380	191
17	17	KBY15_IMG_23256-18810.png	0.9160144	4330	60412	43
18	18	KBY15_IMG_20520-23085.png	nan	0	65102	2
19	19	KBY15_IMG_12483-21717.png	0.9006526	621	64778	7
20	20	KBY15_IMG_10602-3762.png	0.96228206	4554	60625	130
21	21	KBY15_IMG_32661-24282.png	0.85	17	65513	3
22	22	KBY15_IMG_30096-12654.png	0.7348928	377	64887	259
23	23	KBY15_IMG_27702-27189.png	0.91801614	7228	57017	13
24	24	KBY15_IMG_28557-24111.png	0.95107985	3655	61505	116
25	25	KBY15_IMG_13509-22401.png	0.9338251	6710	57875	208

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative	False_Positive
26	26	KBY15_IMG_7011-10431.png	0.9644304	16065	48286	369	81	1
27	27	KBY15_IMG_14535-22914.png	0.8839948	2027	62977	58	47	1
28	28	KBY15_IMG_7524-17271.png	0.95468277	474	65017	4	41	1
29	29	KBY15_IMG_7695-15903.png	0.93656415	1720	63583	10	22	1
30	30	KBY15_IMG_15048-2223.png	0.92779946	5108	59633	221	57	1
31	31	KBY15_IMG_11970-3762.png	0.94510597	1627	63720	50	13	1
32	32	KBY15_IMG_30438-24111.png	0.6149606	781	63777	19	95	1
33	33	KBY15_IMG_19836-16416.png	0.95186406	3332	61867	56	28	1
34	34	KBY15_IMG_13680-22401.png	0.42497608	1334	60592	98	35	1
35	35	KBY15_IMG_23085-9234.png	0.95556635	4914	60165	202	25	1
36	36	KBY15_IMG_22743-9576.png	0.9350238	7375	57136	59	96	1
37	37	KBY15_IMG_10773-3420.png	nan	0	65422	11	10	1
38	38	KBY15_IMG_13680-20520.png	0.92574203	4008	60885	78	56	1
39	39	KBY15_IMG_20007-23598.png	0.8352013	5030	58521	11	19	1
40	40	KBY15_IMG_10773-2907.png	0.92576575	8025	56224	245	10	1
41	41	KBY15_IMG_7011-16245.png	nan	0	65503	33	0	1
42	42	KBY15_IMG_7011-9918.png	0.9378819	7368	57192	35	94	1
43	43	KBY15_IMG_3591-14877.png	0.9505182	3256	61941	114	22	1
44	44	KBY15_IMG_3078-16929.png	0.8661088	207	65265	50	14	1
45	45	KBY15_IMG_3249-14706.png	0.9204738	7344	56923	325	94	1
46	46	KBY15_IMG_14877-3420.png	0.91966486	15094	47805	12	26	1
47	47	KBY15_IMG_23256-18468.png	nan	0	65534	2	0	1
48	48	KBY15_IMG_7353-16929.png	0.925746	2001	63214	0	32	1
49	49	KBY15_IMG_6669-16587.png	0.8730538	6757	56814	64	19	1
50	50	KBY15_IMG_19836-16074.png	0.9586987	6395	58590	35	51	1
51	51	KBY15_IMG_14877-2394.png	0.93363816	7147	57373	586	43	1
52	52	KBY15_IMG_12996-7353.png	0.9610703	8764	56062	0	71	1
53	53	KBY15_IMG_14706-23085.png	0.9387981	8475	55956	114	99	1

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		id	png	Dice_score	True_Positive	True_Negative	False_Negat
54	54	KBY15_IMG_28044-13167.png	0.90372723	7965	55874	182	
55	55	KBY15_IMG_17955-24453.png	0.9466283	1481	63888	16	
56	56	KBY15_IMG_28215-22059.png	0.91545254	4147	60623	413	
57	57	KBY15_IMG_27018-15903.png	0.26395938	26	65365	145	
58	58	KBY15_IMG_15048-2736.png	0.88325495	4320	60074	5	
59	59	KBY15_IMG_7695-10089.png	0.950743	2847	62394	127	
60	60	KBY15_IMG_12825-21546.png	0.9160305	240	65252	37	
61	61	KBY15_IMG_19665-15903.png	0.9306972	2236	62967	219	
62	62	KBY15_IMG_10431-4617.png	0.737456	5247	56553	3265	
63	63	KBY15_IMG_11286-4617.png	0.91600484	3806	61032	540	
64	64	KBY15_IMG_16416-4446.png	0.98001444	4070	61300	20	
65	65	KBY15_IMG_10602-3078.png	0.97759026	1854	63597	46	
66	66	KBY15_IMG_27873-13167.png	0.96381927	11881	52763	160	
67	67	KBY15_IMG_28557-22914.png	0.9218488	3291	61687	396	
68	68	KBY15_IMG_12825-21204.png	0.93850774	5006	59874	4	
69	69	KBY15_IMG_7182-16587.png	0.93486863	5196	59616	335	
70	70	KBY15_IMG_30267-12825.png	0.93938726	6393	58318	244	
71	71	KBY15_IMG_10944-4959.png	0.8911982	6389	57587	908	
72	72	KBY15_IMG_29241-23769.png	0.92555946	2151	63039	132	
73	73	KBY15_IMG_15219-2052.png	0.9674147	2479	62890	97	
74	74	KBY15_IMG_6840-16416.png	0.972898	17536	47023	295	
75	75	KBY15_IMG_27873-12996.png	0.87434554	1002	64246	280	
76	76	KBY15_IMG_28728-11970.png	0.85594404	4284	59810	673	
77	77	KBY15_IMG_29241-22914.png	0.91436523	3940	60858	95	
78	78	KBY15_IMG_27702-11457.png	nan	0	64295	11	
79	79	KBY15_IMG_15732-2907.png	0.9534936	10610	53891	392	
80	80	KBY15_IMG_2565-17613.png	0.49709457	1882	59846	79	
81	81	KBY15_IMG_23769-19323.png	0.93538463	3344	61730	75	

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative	False_Positive
82	82	KBY15_IMG_14877-2565.png	0.94294775	595	64869	15	57	
83	83	KBY15_IMG_15561-2565.png	0.8994329	5630	58647	16	12	
84	84	KBY15_IMG_19836-22743.png	0.9370892	998	64404	67	67	
85	85	KBY15_IMG_2907-14706.png	0.96392107	2832	62492	125	87	
86	86	KBY15_IMG_9405-5301.png	0.937299	1749	63553	126	10	
87	87	KBY15_IMG_29070-11970.png	0.5775076	475	64366	120	57	
88	88	KBY15_IMG_29412-22914.png	0.5425347	1250	62178	2	21	
89	89	KBY15_IMG_7524-8550.png	0.9397591	2808	62368	6	35	
90	90	KBY15_IMG_13851-22401.png	0.93855906	9471	54825	662	57	
91	91	KBY15_IMG_17955-24624.png	0.9284765	8386	55858	731	56	
92	92	KBY15_IMG_14364-22743.png	0.9545096	10292	54263	349	63	
93	93	KBY15_IMG_30951-21717.png	0.89228845	7145	56666	299	14	
94	94	KBY15_IMG_31806-22230.png	0.8346201	1027	64102	33	37	
95	95	KBY15_IMG_3933-13167.png	0.96040684	15864	48364	57	12	
96	96	KBY15_IMG_6669-9918.png	0.92984456	6912	57581	21	10	
97	97	KBY15_IMG_11970-4446.png	0.9758742	10173	54860	191	31	
98	98	KBY15_IMG_16074-21717.png	0.9512461	5668	59287	102	47	
99	99	KBY15_IMG_15390-22743.png	0.63882995	1507	62325	968	73	
100	100	KBY15_IMG_3762-13509.png	0.7939263	183	65258	71	24	
101	101	KBY15_IMG_14877-22572.png	0.9334963	6871	57686	493	48	
102	102	KBY15_IMG_3078-17613.png	0.9442668	6794	57940	463	33	
103	103	KBY15_IMG_12654-21204.png	0.93490297	6671	57936	161	76	
104	104	KBY15_IMG_10773-10773.png	0.9418405	6591	58131	179	63	
105	105	KBY15_IMG_15390-2736.png	0.94021386	12180	51807	266	12	
106	106	KBY15_IMG_7353-16074.png	0.9684082	797	64687	11	41	
107	107	KBY15_IMG_9918-13338.png	0.94173396	4372	60623	310	23	
108	108	KBY15_IMG_13509-22572.png	0.9579974	10161	54484	3	88	
109	109	KBY15_IMG_29241-12825.png	0.9302977	3657	61331	40	50	

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		id	png	Dice_score	True_Positive	True_Negative	False_Negat
110	110	KBY15_IMG_9918-3762.png	0.93420506	3358	61705	135	
111	111	KBY15_IMG_7353-17100.png	0.80287504	5250	57708	2081	
112	112	KBY15_IMG_15048-3591.png	0.9583915	3432	61806	20	
113	113	KBY15_IMG_28044-12312.png	0.9693064	8874	56100	145	
114	114	KBY15_IMG_12825-21888.png	0.91056794	6501	57758	1145	
115	115	KBY15_IMG_30438-23940.png	0.8379946	4839	58826	351	
116	116	KBY15_IMG_29070-12483.png	0.9359308	7567	56933	172	
117	117	KBY15_IMG_17955-25650.png	0.84828883	3148	61262	18	
118	118	KBY15_IMG_20349-15561.png	0.9844944	13143	51979	30	
119	119	KBY15_IMG_12825-10602.png	0.93333334	2737	62408	4	
120	120	KBY15_IMG_14364-3420.png	0.24000001	3	65514	17	
121	121	KBY15_IMG_29070-12996.png	0.68085104	64	65412	60	
122	122	KBY15_IMG_7524-9063.png	0.85967135	1020	64183	311	
123	123	KBY15_IMG_32490-23256.png	0.93495727	21878	40614	136	
124	124	KBY15_IMG_28386-22059.png	0.934488	6205	58461	310	
125	125	KBY15_IMG_22914-9405.png	0.93889004	22078	40584	272	
126	126	KBY15_IMG_27360-27189.png	0.9770747	16707	48045	201	
127	127	KBY15_IMG_31977-22230.png	0.92465353	4737	60027	32	
128	128	KBY15_IMG_24624-17955.png	0.83289695	14953	44583	4710	
129	129	KBY15_IMG_13338-21888.png	0.92934954	7123	57330	157	
130	130	KBY15_IMG_12996-21375.png	0.9572223	1723	63659	46	
131	131	KBY15_IMG_28728-11457.png	0.9330677	4684	60180	146	
132	132	KBY15_IMG_12483-21033.png	0.9268626	2034	63181	4	
133	133	KBY15_IMG_11115-10773.png	0.9009237	2487	62502	545	
134	134	KBY15_IMG_11115-4446.png	0.675	27	65483	26	
135	135	KBY15_IMG_7866-16758.png	0.9631468	6403	58643	94	

[Kalobeyei] EfficientNet B1 U-Net (ImageNet)

	id	png	Dice_score	True_Positive	True_Negative	False_Negative
0	0	KBY15_IMG_29925-23256.png	0.94068664	7343	57267	91
1	1	KBY15_IMG_3078-14535.png	0.89050716	1712	63403	18
2	2	KBY15_IMG_11286-9747.png	0.9217323	1160	64179	171
3	3	KBY15_IMG_3933-13509.png	0.9051034	6562	57598	409
4	4	KBY15_IMG_19836-15732.png	0.9397425	2737	62448	4
5	5	KBY15_IMG_30780-24282.png	0.9134209	3893	60905	406
6	6	KBY15_IMG_4104-13167.png	0.841961	6758	56241	1754
7	7	KBY15_IMG_7182-9918.png	0.91816825	1223	64095	31
8	8	KBY15_IMG_7524-9405.png	0.945241	16580	47035	791
9	9	KBY15_IMG_9747-4104.png	0.94473064	3393	61746	100
10	10	KBY15_IMG_29583-12483.png	0.80271727	2895	61218	170
11	11	KBY15_IMG_12825-7695.png	0.68751776	1209	63228	43
12	12	KBY15_IMG_14877-22743.png	0.4354865	1345	60704	87
13	13	KBY15_IMG_14193-3249.png	0.97136027	15839	48763	82
14	14	KBY15_IMG_20178-22914.png	0.2	2	65518	4
15	15	KBY15_IMG_8037-16416.png	0.9562994	8414	56353	175
16	16	KBY15_IMG_19836-15903.png	0.89329726	6597	57363	734
17	17	KBY15_IMG_23256-18810.png	0.96327394	22255	41584	95
18	18	KBY15_IMG_20520-23085.png	0.94411707	7290	57383	443
19	19	KBY15_IMG_12483-21717.png	0.9424037	8492	56006	625
20	20	KBY15_IMG_10602-3762.png	0.9696569	17576	46860	255
21	21	KBY15_IMG_32661-24282.png	nan	0	65269	2
22	22	KBY15_IMG_30096-12654.png	0.9607958	1642	63760	35
23	23	KBY15_IMG_27702-27189.png	0.9507719	3264	61934	106
24	24	KBY15_IMG_28557-24111.png	0.91075516	597	64822	13
25	25	KBY15_IMG_13509-22401.png	0.9259825	6374	58143	123

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		id	png	Dice_score	True_Positive	True_Negative	False_Neg
26	26	KBY15_IMG_7011-10431.png	nan	0	65509	23	
27	27	KBY15_IMG_14535-22914.png	0.88970584	242	65234	35	
28	28	KBY15_IMG_7524-17271.png	nan	0	65439	11	
29	29	KBY15_IMG_7695-15903.png	0.87903225	109	65397	15	
30	30	KBY15_IMG_15048-2223.png	0.94621515	475	65007	3	
31	31	KBY15_IMG_11970-3762.png	0.7465699	925	63983	135	
32	32	KBY15_IMG_30438-24111.png	0.95168453	10607	53852	395	
33	33	KBY15_IMG_19836-16416.png	0.9297347	999	64386	66	
34	34	KBY15_IMG_13680-22401.png	0.96248513	2835	62480	122	
35	35	KBY15_IMG_23085-9234.png	0.9206127	15087	47847	19	
36	36	KBY15_IMG_22743-9576.png	0.85273033	4997	58813	44	
37	37	KBY15_IMG_10773-3420.png	0.9736435	11932	52958	109	
38	38	KBY15_IMG_13680-20520.png	0.9191354	6655	57710	263	
39	39	KBY15_IMG_20007-23598.png	0.9545189	4082	61065	287	
40	40	KBY15_IMG_10773-2907.png	0.0093896715	1	65324	19	
41	41	KBY15_IMG_7011-16245.png	0.9179986	3963	60865	72	
42	42	KBY15_IMG_7011-9918.png	0.94368345	620	64842	8	
43	43	KBY15_IMG_3591-14877.png	0.9274114	2798	62300	16	
44	44	KBY15_IMG_3078-16929.png	0.9516593	4459	60624	223	
45	45	KBY15_IMG_3249-14706.png	0.9808715	4333	61034	40	
46	46	KBY15_IMG_14877-3420.png	0.95130306	6388	58494	42	
47	47	KBY15_IMG_23256-18468.png	0.8902438	219	65263	38	
48	48	KBY15_IMG_7353-16929.png	0.94502974	21842	41153	172	
49	49	KBY15_IMG_6669-16587.png	0.93187296	6764	57783	57	
50	50	KBY15_IMG_19836-16074.png	nan	0	65425	11	
51	51	KBY15_IMG_14877-2394.png	0.9541976	4302	60821	258	
52	52	KBY15_IMG_12996-7353.png	0.54667866	1827	60679	134	
53	53	KBY15_IMG_14706-23085.png	0.87792	4322	60012	3	

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative
54	54		KBY15_IMG_28044-13167.png	0.8502512	846	64392	16
55	55		KBY15_IMG_17955-24453.png	0.924346	7227	57126	14
56	56		KBY15_IMG_28215-22059.png	0.9576975	2479	62838	97
57	57		KBY15_IMG_27018-15903.png	0.9574477	11014	53543	3
58	58		KBY15_IMG_15048-2736.png	0.91316766	5274	59259	55
59	59		KBY15_IMG_7695-10089.png	0.8501626	4837	58994	353
60	60		KBY15_IMG_12825-21546.png	0.92671627	6797	57664	849
61	61		KBY15_IMG_19665-15903.png	0.95498526	3405	61810	47
62	62		KBY15_IMG_10431-4617.png	0.94327545	6926	57777	7
63	63		KBY15_IMG_11286-4617.png	0.94548374	1769	63563	106
64	64		KBY15_IMG_16416-4446.png	0.9557358	5657	59355	113
65	65		KBY15_IMG_10602-3078.png	0.9791068	10216	54884	148
66	66		KBY15_IMG_27873-13167.png	0.71666664	172	65228	82
67	67		KBY15_IMG_28557-22914.png	0.97531444	16673	48019	235
68	68		KBY15_IMG_12825-21204.png	0.9557926	7124	57753	156
69	69		KBY15_IMG_7182-16587.png	0.932868	6816	57739	628
70	70		KBY15_IMG_30267-12825.png	0.67924535	90	65361	81
71	71		KBY15_IMG_10944-4959.png	0.6410726	526	64421	69
72	72		KBY15_IMG_29241-23769.png	0.93455476	6733	57860	99
73	73		KBY15_IMG_15219-2052.png	0.95665747	3984	61191	102
74	74		KBY15_IMG_6840-16416.png	0.8998436	575	64833	61
75	75		KBY15_IMG_27873-12996.png	0.94146156	6216	58547	299
76	76		KBY15_IMG_28728-11970.png	0.9185056	4745	59949	24
77	77		KBY15_IMG_29241-22914.png	0.9493594	778	64675	30
78	78		KBY15_IMG_27702-11457.png	0.97141355	1852	63575	48
79	79		KBY15_IMG_15732-2907.png	0.9060345	3153	61729	13
80	80		KBY15_IMG_2565-17613.png	0.9833982	13150	51942	23
81	81		KBY15_IMG_23769-19323.png	0.9647841	1452	63978	45

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		id	png	Dice_score	True_Positive	True_Negative	False_Neg
82	82	KBY15_IMG_14877-2565.png	0.9754958	10231	54791	180	
83	83	KBY15_IMG_15561-2565.png	0.9355742	2171	63066	112	
84	84	KBY15_IMG_19836-22743.png	0.9328007	7239	57254	58	
85	85	KBY15_IMG_2907-14706.png	0.9317794	1639	63657	169	
86	86	KBY15_IMG_9405-5301.png	0.9701662	16227	48311	207	
87	87	KBY15_IMG_29070-11970.png	0.9442496	1211	64182	71	
88	88	KBY15_IMG_29412-22914.png	0.9149034	7956	56100	191	
89	89	KBY15_IMG_7524-8550.png	0.9480543	5238	59724	293	
90	90	KBY15_IMG_13851-22401.png	0.97887325	8757	56401	7	
91	91	KBY15_IMG_17955-24624.png	0.06896552	2	65480	51	
92	92	KBY15_IMG_14364-22743.png	0.9734957	4077	61237	13	
93	93	KBY15_IMG_30951-21717.png	0.96486074	8869	56021	150	
94	94	KBY15_IMG_31806-22230.png	0.95367575	2841	62419	133	
95	95	KBY15_IMG_3933-13167.png	0.93644065	1989	63277	12	
96	96	KBY15_IMG_6669-9918.png	0.8145222	2165	62385	310	
97	97	KBY15_IMG_11970-4446.png	0.9401074	6828	57838	536	
98	98	KBY15_IMG_16074-21717.png	0.97471327	10157	54852	7	
99	99	KBY15_IMG_15390-22743.png	0.9559097	3328	61901	44	
100	100	KBY15_IMG_3762-13509.png	0.9532384	7940	56817	330	
101	101	KBY15_IMG_14877-22572.png	0.930398	2747	62378	6	
102	102	KBY15_IMG_3078-17613.png	0.91987294	2606	62476	426	
103	103	KBY15_IMG_12654-21204.png	0.93887174	9561	54730	572	
104	104	KBY15_IMG_10773-10773.png	0.9720758	6179	59002	64	
105	105	KBY15_IMG_15390-2736.png	0.8493233	4267	59755	690	
106	106	KBY15_IMG_7353-16074.png	0.9164602	2035	63130	3	
107	107	KBY15_IMG_9918-13338.png	0.94914913	4685	60349	145	
108	108	KBY15_IMG_13509-22572.png	0.95885414	7364	57540	39	
109	109	KBY15_IMG_29241-12825.png	0.94033366	4988	59915	22	

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				Dice_score	True_Positive	True_Negative	False_Negative
110	110	KBY15_IMG_9918-3762.png		0.9537413	3639	61544	58
111	111	KBY15_IMG_7353-17100.png		0.9568521	3526	61692	97
112	112	KBY15_IMG_15048-3591.png		0.9422718	2024	63264	61
113	113	KBY15_IMG_28044-12312.png		0.96073115	3364	61897	55
114	114	KBY15_IMG_12825-21888.png		0.20000002	4	65500	29
115	115	KBY15_IMG_30438-23940.png		0.9561483	3674	61525	97
116	116	KBY15_IMG_29070-12483.png		0.92595667	5590	59052	56
117	117	KBY15_IMG_17955-25650.png		0.9577386	1711	63674	58
118	118	KBY15_IMG_20349-15561.png		0.9542942	19073	44636	590
119	119	KBY15_IMG_12825-10602.png		0.9549012	10248	54320	393
120	120	KBY15_IMG_14364-3420.png		0.9162384	3566	61318	121
121	121	KBY15_IMG_29070-12996.png		nan	0	65530	2
122	122	KBY15_IMG_7524-9063.png		0.709873	1873	62132	488
123	123	KBY15_IMG_32490-23256.png		0.9462964	7480	57207	259
124	124	KBY15_IMG_28386-22059.png		0.16666666	2	65514	18
125	125	KBY15_IMG_22914-9405.png		0.94555646	12140	51998	306
126	126	KBY15_IMG_27360-27189.png		0.96114993	4948	60188	168
127	127	KBY15_IMG_31977-22230.png		0.9651002	4549	60658	135
128	128	KBY15_IMG_24624-17955.png		0.68359876	794	64007	6
129	129	KBY15_IMG_13338-21888.png		0.94582087	6948	57792	309
130	130	KBY15_IMG_12996-21375.png		0.9083438	3979	60754	367
131	131	KBY15_IMG_28728-11457.png		0.9309091	7424	57010	245
132	132	KBY15_IMG_12483-21033.png		0.9480833	6492	58333	145
133	133	KBY15_IMG_11115-10773.png		0.9392944	6576	58110	194
134	134	KBY15_IMG_11115-4446.png		0.9570693	3344	61892	44
135	135	KBY15_IMG_7866-16758.png		0.94137424	2240	63017	215

[Kalobeyei] EfficientNet B1 U-Net (No ImageNet)

	id	png	Dice_score	True_Positive	True_Negative	False_Negat
0	0	KBY15_IMG_29925-23256.png	0.92787135	7384	57004	285
1	1	KBY15_IMG_3078-14535.png	0.37037036	5	65514	15
2	2	KBY15_IMG_11286-9747.png	0.9263257	987	64392	78
3	3	KBY15_IMG_3933-13509.png	nan	0	65533	2
4	4	KBY15_IMG_19836-15732.png	0.89198035	1090	64182	241
5	5	KBY15_IMG_30780-24282.png	0.95787024	7412	57472	321
6	6	KBY15_IMG_4104-13167.png	0.95305955	6487	58410	150
7	7	KBY15_IMG_7182-9918.png	0.8829902	3709	60844	590
8	8	KBY15_IMG_7524-9405.png	nan	0	65512	23
9	9	KBY15_IMG_9747-4104.png	0.9628043	11687	52946	354
10	10	KBY15_IMG_29583-12483.png	0.94494325	7157	57545	140
11	11	KBY15_IMG_12825-7695.png	0.980521	10143	54990	21
12	12	KBY15_IMG_14877-22743.png	0.42780748	1320	60685	112
13	13	KBY15_IMG_14193-3249.png	0.9752317	6103	59123	140
14	14	KBY15_IMG_20178-22914.png	0.89893687	6849	57147	595
15	15	KBY15_IMG_8037-16416.png	0.9195562	1989	63199	49
16	16	KBY15_IMG_19836-15903.png	0.9405446	1226	64155	28
17	17	KBY15_IMG_23256-18810.png	0.94541687	3646	61469	51
18	18	KBY15_IMG_20520-23085.png	0.8574621	4220	59913	737
19	19	KBY15_IMG_12483-21717.png	0.93989724	3933	61100	102
20	20	KBY15_IMG_10602-3762.png	0.93979704	6252	58483	263
21	21	KBY15_IMG_32661-24282.png	0.93250203	6880	57660	484
22	22	KBY15_IMG_30096-12654.png	0.88469815	4316	60095	9
23	23	KBY15_IMG_27702-27189.png	0.97623605	4334	60991	39
24	24	KBY15_IMG_28557-24111.png	0.8722329	5004	59066	37
25	25	KBY15_IMG_13509-22401.png	0.9310574	5591	59117	55

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative	Fa
26	26	KBY15_IMG_7011-10431.png	0.9521457	3661	61507	110	25	
27	27	KBY15_IMG_14535-22914.png	0.16216215	3	65502	30	1	
28	28	KBY15_IMG_7524-17271.png	0.9536331	21832	41581	182	19	
29	29	KBY15_IMG_7695-15903.png	0.9769795	15830	48960	91	65	
30	30	KBY15_IMG_15048-2223.png	0.6607744	785	63945	15	79	
31	31	KBY15_IMG_11970-3762.png	0.94543475	5224	59709	307	29	
32	32	KBY15_IMG_30438-24111.png	0.9212303	614	64817	14	91	
33	33	KBY15_IMG_19836-16416.png	0.69441044	851	63936	11	73	
34	34	KBY15_IMG_13680-22401.png	0.9465284	593	64876	17	50	
35	35	KBY15_IMG_23085-9234.png	0.63402385	505	64448	90	49	
36	36	KBY15_IMG_22743-9576.png	0.939648	2242	63006	213	75	
37	37	KBY15_IMG_10773-3420.png	0.9396311	12125	51853	321	12	
38	38	KBY15_IMG_13680-20520.png	0.8800294	2395	62488	637	16	
39	39	KBY15_IMG_20007-23598.png	0.8980392	229	65255	48	4	
40	40	KBY15_IMG_10773-2907.png	0.9335142	1720	63571	10	23	
41	41	KBY15_IMG_7011-16245.png	nan	0	65515	20	1	
42	42	KBY15_IMG_7011-9918.png	0.9546451	16986	46936	385	12	
43	43	KBY15_IMG_3591-14877.png	0.94929755	777	64676	31	52	
44	44	KBY15_IMG_3078-16929.png	0.9505996	3329	61861	43	30	
45	45	KBY15_IMG_3249-14706.png	0.9733876	10278	54696	133	42	
46	46	KBY15_IMG_14877-3420.png	nan	0	65248	2	28	
47	47	KBY15_IMG_23256-18468.png	0.9784654	16698	48103	210	52	
48	48	KBY15_IMG_7353-16929.png	0.9686661	1623	63808	54	51	
49	49	KBY15_IMG_6669-16587.png	0.9359979	1733	63566	142	95	
50	50	KBY15_IMG_19836-16074.png	0.9378315	6630	58027	140	73	
51	51	KBY15_IMG_14877-2394.png	0.9801547	8742	56440	22	33	
52	52	KBY15_IMG_12996-7353.png	0.9585445	22128	41494	222	16	
53	53	KBY15_IMG_14706-23085.png	0.93299687	1664	63633	144	95	

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		id	png	Dice_score	True_Positive	True_Negative	False_Negat
54	54	KBY15_IMG_28044-13167.png	0.9711013	1865	63560	35	
55	55	KBY15_IMG_17955-24453.png	0.72744113	1963	62102	398	
56	56	KBY15_IMG_28215-22059.png	0.9634022	2843	62477	131	
57	57	KBY15_IMG_27018-15903.png	0.95050573	10572	53863	430	
58	58	KBY15_IMG_15048-2736.png	0.8400837	5621	57775	1710	
59	59	KBY15_IMG_7695-10089.png	nan	0	65273	11	
60	60	KBY15_IMG_12825-21546.png	0.97160584	4072	61226	18	
61	61	KBY15_IMG_19665-15903.png	0.78108054	5978	56207	2534	
62	62	KBY15_IMG_10431-4617.png	0.9542113	4543	60557	141	
63	63	KBY15_IMG_11286-4617.png	0.92025596	17541	44955	2122	
64	64	KBY15_IMG_16416-4446.png	0.9604155	3421	61833	31	
65	65	KBY15_IMG_10602-3078.png	0.2885572	29	65364	142	
66	66	KBY15_IMG_27873-13167.png	0.94970614	4362	60712	198	
67	67	KBY15_IMG_28557-22914.png	0.9572223	1723	63659	46	
68	68	KBY15_IMG_12825-21204.png	0.65206945	1221	63012	31	
69	69	KBY15_IMG_7182-16587.png	0.9080106	6495	57725	476	
70	70	KBY15_IMG_30267-12825.png	0.8034935	92	65399	32	
71	71	KBY15_IMG_10944-4959.png	0.92727023	6719	57763	113	
72	72	KBY15_IMG_29241-23769.png	0.86415666	3133	61418	33	
73	73	KBY15_IMG_15219-2052.png	0.9378627	8324	56109	793	
74	74	KBY15_IMG_6840-16416.png	0.9289254	15089	48138	17	
75	75	KBY15_IMG_27873-12996.png	0.9525639	3223	61992	147	
76	76	KBY15_IMG_28728-11970.png	0.9247312	473	64986	5	
77	77	KBY15_IMG_29241-22914.png	0.9638116	16153	48170	281	
78	78	KBY15_IMG_27702-11457.png	0.9588454	17439	46600	392	
79	79	KBY15_IMG_15732-2907.png	0.84856355	4903	58883	287	
80	80	KBY15_IMG_2565-17613.png	0.94799304	4393	60661	289	
81	81	KBY15_IMG_23769-19323.png	0.88976383	226	65254	31	

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative	Fa
82	82	KBY15_IMG_14877-2565.png	0.94812554	10281	54130	360		76
83	83	KBY15_IMG_15561-2565.png	nan	0	65340	11		18
84	84	KBY15_IMG_19836-22743.png	0.9884901	13097	52134	76		22
85	85	KBY15_IMG_2907-14706.png	0.9171627	2696	62353	57		43
86	86	KBY15_IMG_9405-5301.png	0.9641002	4176	61049	193		11
87	87	KBY15_IMG_29070-11970.png	0.943543	5699	59155	71		61
88	88	KBY15_IMG_29412-22914.png	0.7248792	3001	60257	64		22
89	89	KBY15_IMG_7524-8550.png	0.9164807	4724	59951	45		81
90	90	KBY15_IMG_13851-22401.png	0.92902315	6610	57916	647		36
91	91	KBY15_IMG_17955-24624.png	0.9302201	5219	59534	110		67
92	92	KBY15_IMG_14364-22743.png	0.9453195	6872	57869	61		73
93	93	KBY15_IMG_30951-21717.png	0.4907395	1868	59791	93		37
94	94	KBY15_IMG_31806-22230.png	0.9370234	3318	61772	369		77
95	95	KBY15_IMG_3933-13167.png	0.95319724	4949	60101	167		31
96	96	KBY15_IMG_6669-9918.png	0.962141	1474	63946	23		93
97	97	KBY15_IMG_11970-4446.png	0.9811665	10237	54906	127		26
98	98	KBY15_IMG_16074-21717.png	0.9423831	4686	60277	144		42
99	99	KBY15_IMG_15390-22743.png	0.92973816	9534	54561	599		84
100	100	KBY15_IMG_3762-13509.png	0.7507246	1036	63812	24		66
101	101	KBY15_IMG_14877-22572.png	0.91182226	7223	56916	18		13
102	102	KBY15_IMG_3078-17613.png	0.967667	2499	62870	77		90
103	103	KBY15_IMG_12654-21204.png	0.88641423	597	64786	39		11
104	104	KBY15_IMG_10773-10773.png	0.92938495	2040	63186	45		26
105	105	KBY15_IMG_15390-2736.png	0.9280453	7371	57022	63		10
106	106	KBY15_IMG_7353-16074.png	0.9390142	3372	61726	121		31
107	107	KBY15_IMG_9918-13338.png	0.9415953	8464	56022	125		92
108	108	KBY15_IMG_13509-22572.png	0.8984675	3752	60936	594		25
109	109	KBY15_IMG_29241-12825.png	0.915166	6683	57614	235		10

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		id	png	Dice_score	True_Positive	True_Negative	False_Negat
110	110	KBY15_IMG_9918-3762.png	0.93730104	6331	58358	166	
111	111	KBY15_IMG_7353-17100.png	0.9564499	11003	53531	14	
112	112	KBY15_IMG_15048-3591.png	0.9618579	2837	62474	120	
113	113	KBY15_IMG_28044-12312.png	0.25	1	65529	5	
114	114	KBY15_IMG_12825-21888.png	0.96297365	3342	61937	77	
115	115	KBY15_IMG_30438-23940.png	0.9238147	6742	57682	904	
116	116	KBY15_IMG_29070-12483.png	0.9575156	6367	58604	63	
117	117	KBY15_IMG_17955-25650.png	0.92937154	4895	59897	115	
118	118	KBY15_IMG_20349-15561.png	0.90507054	7961	55905	186	
119	119	KBY15_IMG_12825-10602.png	0.9668452	3339	61968	49	
120	120	KBY15_IMG_14364-3420.png	0.9199016	6730	57634	91	
121	121	KBY15_IMG_29070-12996.png	0.9509869	7179	57617	101	
122	122	KBY15_IMG_7524-9063.png	0.84549934	944	64247	338	
123	123	KBY15_IMG_32490-23256.png	0.6744186	29	65479	24	
124	124	KBY15_IMG_28386-22059.png	0.9641551	1977	63412	24	
125	125	KBY15_IMG_22914-9405.png	0.9376511	7369	57187	34	
126	126	KBY15_IMG_27360-27189.png	0.93356484	2150	63080	133	
127	127	KBY15_IMG_31977-22230.png	0.93020886	2739	62386	2	
128	128	KBY15_IMG_24624-17955.png	0.93965614	8035	56469	235	
129	129	KBY15_IMG_13338-21888.png	0.9552704	3983	61180	103	
130	130	KBY15_IMG_12996-21375.png	0.93695474	7572	56945	167	
131	131	KBY15_IMG_28728-11457.png	0.96758324	8850	56093	169	
132	132	KBY15_IMG_12483-21033.png	0.6973527	1462	62805	1013	
133	133	KBY15_IMG_11115-10773.png	0.96017516	3508	61737	115	
134	134	KBY15_IMG_11115-4446.png	0.9343797	2798	62345	16	
135	135	KBY15_IMG_7866-16758.png	0.5989305	112	65274	142	

[Kalobeyei] EfficientNet B1 U-Net (OCC transferred-untrained)

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	id	png	Dice_score	True_Positive	True_Negative	False_Negative	F1_Score
0	0	KBY15_IMG_28215-22059.png	nan	0	65309	23	2.0
1	1	KBY15_IMG_8037-16416.png	0.2780749	78	65053	400	5.0
2	2	KBY15_IMG_29241-22914.png	0.6386991	8366	47705	9465	0.0
3	3	KBY15_IMG_29925-23256.png	0.82994384	3326	60847	1358	5.0
4	4	KBY15_IMG_7524-17271.png	0.95777327	4026	61155	347	8.0
5	5	KBY15_IMG_28728-11457.png	0.82482725	6505	56268	1234	1.0
6	6	KBY15_IMG_3933-13509.png	0.88749313	2402	62525	555	5.0
7	7	KBY15_IMG_20178-22914.png	0.291116	793	60881	639	3.0
8	8	KBY15_IMG_15732-2907.png	0.97812384	9859	55236	305	1.0
9	9	KBY15_IMG_16074-21717.png	0.8074603	4416	59014	2099	7.0
10	10	KBY15_IMG_12483-21033.png	0.8264293	2414	62108	956	5.0
11	11	KBY15_IMG_12825-21204.png	0.9045583	5606	58747	891	2.0
12	12	KBY15_IMG_14877-22743.png	0.7772953	4923	57792	2521	3.0
13	13	KBY15_IMG_11970-3762.png	0.9374854	4004	60998	321	2.0
14	14	KBY15_IMG_9747-4104.png	0.022179363	46	61434	3641	4.0
15	15	KBY15_IMG_19836-22743.png	0.8774605	7712	55670	1307	8.0
16	16	KBY15_IMG_19836-16416.png	0.17699951	187	63610	1543	1.0
17	17	KBY15_IMG_7353-17100.png	0.53931624	2524	58700	4308	4.0
18	18	KBY15_IMG_20007-23598.png	0.6183678	2902	59052	2427	1.0
19	19	KBY15_IMG_10602-3078.png	0.464499	3150	55123	7261	2.0
20	20	KBY15_IMG_27873-13167.png	0.33623692	193	64581	417	3.0
21	21	KBY15_IMG_9918-3762.png	0.39309826	262	64465	798	1.0
22	22	KBY15_IMG_3078-14535.png	0.118003026	39	64914	85	4.0
23	23	KBY15_IMG_17955-25650.png	0.8589939	1127	64039	370	0.0
24	24	KBY15_IMG_14535-22914.png	0.6330799	333	64817	295	9.0
25	25	KBY15_IMG_3249-14706.png	0.61787564	477	64469	588	2.0
26	26	KBY15_IMG_3078-16929.png	0.31374928	259	64144	1072	6.0

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		id	png	Dice_score	True_Positive	True_Negative	False_Nega
27	27	KBY15_IMG_6669-9918.png	0.7395568	2753	60844	1929	
28	28	KBY15_IMG_14877-2565.png	0.72493744	3189	59927	1927	
29	29	KBY15_IMG_27702-11457.png	0.8007259	2427	61901	1066	
30	30	KBY15_IMG_30438-24111.png	0.9465493	3710	61407	325	
31	31	KBY15_IMG_27018-15903.png	0.07951233	150	61913	2915	
32	32	KBY15_IMG_28728-11970.png	0.84890187	3208	61186	1138	
33	33	KBY15_IMG_27360-27189.png	0.9296889	10459	53495	1582	
34	34	KBY15_IMG_10944-4959.png	0.4325764	1381	60532	3576	
35	35	KBY15_IMG_29070-12996.png	0.827892	2054	62628	760	
36	36	KBY15_IMG_3762-13509.png	0.8826952	7205	56416	1912	
37	37	KBY15_IMG_10602-3762.png	0.48477712	1441	61032	1978	
38	38	KBY15_IMG_15048-2736.png	0.1821782	230	63241	1771	
39	39	KBY15_IMG_12825-21888.png	0.945946	2520	62728	233	
40	40	KBY15_IMG_22914-9405.png	0.60794044	735	63853	547	
41	41	KBY15_IMG_7011-16245.png	0.8952032	1465	63728	343	
42	42	KBY15_IMG_12996-7353.png	0.77322686	1548	63080	907	
43	43	KBY15_IMG_7524-8550.png	0.97600186	12567	52351	606	
44	44	KBY15_IMG_16416-4446.png	0.80021524	6691	55504	712	
45	45	KBY15_IMG_9918-13338.png	0.6394474	2592	60021	2177	
46	46	KBY15_IMG_13680-22401.png	0.6868541	4287	57340	3359	
47	47	KBY15_IMG_15048-3591.png	0.024112524	18	64061	2	
48	48	KBY15_IMG_19836-15903.png	0.795999	6446	55786	375	
49	49	KBY15_IMG_19836-15732.png	0.976512	4989	60307	21	
50	50	KBY15_IMG_27873-12996.png	0.80046433	2758	61403	1328	
51	51	KBY15_IMG_29412-22914.png	0.117985606	41	64882	12	
52	52	KBY15_IMG_6669-16587.png	0.12500001	52	64756	584	
53	53	KBY15_IMG_28044-13167.png	0.7603709	779	64266	21	
54	54	KBY15_IMG_30780-24282.png	0.745014	2260	61729	1511	

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				Dice_score	True_Positive	True_Negative	False_Negative	F1
55	55	KBY15_IMG_29583-12483.png		0.89981264	6242	57904	999	3
56	56	KBY15_IMG_19665-15903.png		0.9894633	4038	61412	52	3
57	57	KBY15_IMG_29241-23769.png		0.82002497	12154	48047	5217	1
58	58	KBY15_IMG_13680-20520.png		0.8203867	3670	60259	1520	8
59	59	KBY15_IMG_7524-9405.png		0.8385735	1987	62784	51	7
60	60	KBY15_IMG_30951-21717.png		0.37553903	958	61392	1517	1
61	61	KBY15_IMG_10773-2907.png		0.60658574	175	65134	82	1
62	62	KBY15_IMG_20349-15561.png		0.7635562	1211	63575	750	0
63	63	KBY15_IMG_15561-2565.png		0.71896774	1393	63054	968	1
64	64	KBY15_IMG_14364-22743.png		0.76571465	13820	43259	8194	2
65	65	KBY15_IMG_19836-16074.png		0.783592	1767	62793	974	2
66	66	KBY15_IMG_7695-10089.png		0.060037524	16	65019	17	4
67	67	KBY15_IMG_14877-2394.png		0.31911853	1564	57298	5407	1
68	68	KBY15_IMG_28044-12312.png		0.57979184	2674	58986	3756	1
69	69	KBY15_IMG_10773-3420.png		0.94102633	9215	55166	1149	6
70	70	KBY15_IMG_12996-21375.png		nan	0	65271	20	2
71	71	KBY15_IMG_29070-11970.png		0.9079108	16366	45850	3297	2
72	72	KBY15_IMG_23085-9234.png		0.90109295	4947	59503	823	2
73	73	KBY15_IMG_11115-10773.png		0.8399338	5334	58169	2030	3
74	74	KBY15_IMG_11286-4617.png		0.61646265	3827	56947	4762	0
75	75	KBY15_IMG_10431-4617.png		0.93089634	1859	63401	226	5
76	76	KBY15_IMG_23256-18810.png		nan	0	63713	11	1
77	77	KBY15_IMG_7182-9918.png		0.52535033	2062	59748	2979	7
78	78	KBY15_IMG_32490-23256.png		0.62837386	3725	57405	3944	4
79	79	KBY15_IMG_28557-22914.png		0.6935522	4394	57259	2863	1
80	80	KBY15_IMG_7524-9063.png		0.9081414	9303	54351	1699	1
81	81	KBY15_IMG_7353-16074.png		0.84179014	2953	61473	435	6
82	82	KBY15_IMG_23256-18468.png		0.5967457	2879	58766	3891	0

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		id	png	Dice_score	True_Positive	True_Negative	False_Nega
83	83	KBY15_IMG_14706-23085.png	0.8162619	773	64415	89	
84	84	KBY15_IMG_15219-2052.png	0.80879515	3145	60904	21	
85	85	KBY15_IMG_7011-10431.png	0.3331887	384	63615	1516	
86	86	KBY15_IMG_12825-21546.png	0.77879345	213	65202	41	
87	87	KBY15_IMG_14877-22572.png	0.8903753	2396	62550	578	
88	88	KBY15_IMG_22743-9576.png	0.93277055	1547	63766	222	
89	89	KBY15_IMG_12483-21717.png	0.2197205	283	63243	2000	
90	90	KBY15_IMG_12654-21204.png	0.5923345	2040	60688	2790	
91	91	KBY15_IMG_10773-10773.png	0.8343348	1458	63499	219	
92	92	KBY15_IMG_17955-24453.png	0.7916207	4667	58412	1970	
93	93	KBY15_IMG_3591-14877.png	0.011379801	4	64837	2	
94	94	KBY15_IMG_12825-7695.png	0.93396366	3161	61928	291	
95	95	KBY15_IMG_7353-16929.png	nan	0	65328	11	
96	96	KBY15_IMG_3933-13167.png	0.8655891	17056	43183	5294	
97	97	KBY15_IMG_13338-21888.png	0.6602788	379	64767	216	
98	98	KBY15_IMG_14364-3420.png	0.5557179	2663	58615	4255	
99	99	KBY15_IMG_23769-19323.png	0.46146205	2323	57791	5410	
100	100	KBY15_IMG_7695-15903.png	0.9122962	3105	61834	592	
101	101	KBY15_IMG_6840-16416.png	0.57653767	1467	61914	1905	
102	102	KBY15_IMG_28557-24111.png	0.15367231	68	64719	740	
103	103	KBY15_IMG_13851-22401.png	0.89802516	5002	59398	644	
104	104	KBY15_IMG_15390-22743.png	0.6805791	3196	59340	2335	
105	105	KBY15_IMG_15048-2223.png	0.78508896	8161	52907	4285	
106	106	KBY15_IMG_30267-12825.png	0.85867417	12817	48500	4091	
107	107	KBY15_IMG_13509-22401.png	0.07804879	8	65339	163	
108	108	KBY15_IMG_7866-16758.png	0.60893816	4585	55062	5548	
109	109	KBY15_IMG_30438-23940.png	0.97132593	15142	49500	779	
110	110	KBY15_IMG_2565-17613.png	0.16213018	137	63983	1117	

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				Dice_score	True_Positive	True_Negative	False_Negative	F1_Score
111	111	KBY15_IMG_29241-12825.png		0.6968029	3923	58199	3408	69.1
112	112	KBY15_IMG_27702-27189.png		0.84701973	5606	57905	1691	33.9
113	113	KBY15_IMG_3078-17613.png		nan	0	63726	2	1.1
114	114	KBY15_IMG_31977-22230.png		0.7662186	7240	53878	3401	1.1
115	115	KBY15_IMG_31806-22230.png		0.79957324	5246	57660	2188	4.4
116	116	KBY15_IMG_12825-10602.png		0.9649934	5844	59268	399	2.2
117	117	KBY15_IMG_2907-14706.png		0.9232668	2244	62919	332	4.4
118	118	KBY15_IMG_30096-12654.png		0.8445652	1554	63410	321	2.2
119	119	KBY15_IMG_17955-24624.png		nan	0	65155	2	3.3
120	120	KBY15_IMG_29070-12483.png		0.061696656	48	64028	1204	2.2
121	121	KBY15_IMG_13509-22572.png		0.8936357	13241	49143	1865	1.1
122	122	KBY15_IMG_11286-9747.png		0.3790049	2011	56935	6501	8.8
123	123	KBY15_IMG_20520-23085.png		0.9256178	3783	61145	586	2.2
124	124	KBY15_IMG_14877-3420.png		0.03580092	214	53795	10803	7.7
125	125	KBY15_IMG_15390-2736.png		0.94903296	3901	61216	398	2.2
126	126	KBY15_IMG_7182-16587.png		0.42750242	1971	58286	4962	3.3
127	127	KBY15_IMG_7011-9918.png		0.30409357	182	64521	95	7.7
128	128	KBY15_IMG_11115-4446.png		0.5313665	3278	56476	4002	1.1
129	129	KBY15_IMG_4104-13167.png		0.98241794	8577	56652	187	1.1
130	130	KBY15_IMG_28386-22059.png		0.33887884	937	60943	3623	3.3
131	131	KBY15_IMG_32661-24282.png		0.68698066	1612	62455	1420	4.4
132	132	KBY15_IMG_11970-4446.png		0.7424896	4906	57227	3364	3.3
133	133	KBY15_IMG_14193-3249.png		0.9149808	7033	57196	1114	1.1
134	134	KBY15_IMG_24624-17955.png		0.94261223	3244	61897	379	1.1
135	135	KBY15_IMG_9405-5301.png		0.9256366	14159	49102	2275	0.0

[Kalobeyei] EfficientNet_B1 U-Net (OCC transferred-trained)

	id	png	Dice_score	True_Positive	True_Negative	False_Negat
0	0	KBY15_IMG_29925-23256.png	0.93260163	7223	57269	510
1	1	KBY15_IMG_3078-14535.png	0.9594826	2522	62801	54
2	2	KBY15_IMG_11286-9747.png	0.9141836	5630	58849	16
3	3	KBY15_IMG_3933-13509.png	0.94979614	16885	46866	486
4	4	KBY15_IMG_19836-15732.png	0.90309817	7987	55835	160
5	5	KBY15_IMG_30780-24282.png	0.9347079	4896	59956	114
6	6	KBY15_IMG_4104-13167.png	0.937788	1221	64153	33
7	7	KBY15_IMG_7182-9918.png	0.8796844	223	65252	34
8	8	KBY15_IMG_7524-9405.png	0.9443125	1789	63536	86
9	9	KBY15_IMG_9747-4104.png	0.73114336	1992	62079	369
10	10	KBY15_IMG_29583-12483.png	0.9245467	4742	60020	27
11	11	KBY15_IMG_12825-7695.png	0.9775085	13147	51784	26
12	12	KBY15_IMG_14877-22743.png	0.8728256	1129	64078	202
13	13	KBY15_IMG_14193-3249.png	0.8028404	961	64103	99
14	14	KBY15_IMG_20178-22914.png	0.9564785	2879	62395	95
15	15	KBY15_IMG_8037-16416.png	0.3412322	36	65361	135
16	16	KBY15_IMG_19836-15903.png	0.8770683	4320	60005	5
17	17	KBY15_IMG_23256-18810.png	0.9427583	12130	51933	316
18	18	KBY15_IMG_20520-23085.png	0.9301277	619	64824	9
19	19	KBY15_IMG_12483-21717.png	0.9328868	7381	57093	288
20	20	KBY15_IMG_10602-3762.png	0.9508979	7572	57182	167
21	21	KBY15_IMG_32661-24282.png	0.9060169	3644	61136	43
22	22	KBY15_IMG_30096-12654.png	0.9126968	6696	57559	275
23	23	KBY15_IMG_27702-27189.png	0.95840913	7374	57522	29
24	24	KBY15_IMG_28557-24111.png	0.94018567	2735	62453	6
25	25	KBY15_IMG_13509-22401.png	0.9535403	19190	44476	473

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative	False_Positive
26	26	KBY15_IMG_7011-10431.png	0.9375443	11904	52046	137	14	14
27	27	KBY15_IMG_14535-22914.png	0.9383438	4170	60818	129	41	41
28	28	KBY15_IMG_7524-17271.png	0.93488574	2168	63066	115	18	18
29	29	KBY15_IMG_7695-15903.png	0.92076576	6926	57418	405	78	78
30	30	KBY15_IMG_15048-2223.png	0.93768704	6892	57728	41	87	87
31	31	KBY15_IMG_11970-3762.png	0.92362344	260	65233	17	26	26
32	32	KBY15_IMG_30438-24111.png	0.9410805	6924	57745	440	42	42
33	33	KBY15_IMG_19836-16416.png	0.6631717	506	64516	89	42	42
34	34	KBY15_IMG_13680-22401.png	0.9378925	2016	63253	22	24	24
35	35	KBY15_IMG_23085-9234.png	0.9531878	3319	61891	53	27	27
36	36	KBY15_IMG_22743-9576.png	0.8613897	4810	59178	380	11	11
37	37	KBY15_IMG_10773-3420.png	0.6865285	795	64015	5	72	72
38	38	KBY15_IMG_13680-20520.png	0.8572395	3801	60469	545	72	72
39	39	KBY15_IMG_20007-23598.png	0.9515028	7946	56780	324	48	48
40	40	KBY15_IMG_10773-2907.png	nan	0	65509	23	4	4
41	41	KBY15_IMG_7011-16245.png	0.9632815	1456	63969	41	70	70
42	42	KBY15_IMG_7011-9918.png	0.95759	1637	63754	40	10	10
43	43	KBY15_IMG_3591-14877.png	0.89879864	2207	62832	268	22	22
44	44	KBY15_IMG_3078-16929.png	0.9365189	6801	57813	643	27	27
45	45	KBY15_IMG_3249-14706.png	0.90115666	1714	63446	16	36	36
46	46	KBY15_IMG_14877-3420.png	0.9658649	4598	60613	86	23	23
47	47	KBY15_IMG_23256-18468.png	0.97096515	17540	46947	291	75	75
48	48	KBY15_IMG_7353-16929.png	0.9835202	4297	61095	76	68	68
49	49	KBY15_IMG_6669-16587.png	0.92694265	6382	58148	115	89	89
50	50	KBY15_IMG_19836-16074.png	0.9778375	22193	42337	157	84	84
51	51	KBY15_IMG_14877-2394.png	0.94933534	6249	58620	266	40	40
52	52	KBY15_IMG_12996-7353.png	nan	0	65530	2	4	4
53	53	KBY15_IMG_14706-23085.png	0.90904397	5282	59197	47	10	10

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		id	png	Dice_score	True_Positive	True_Negative	False_Negat
54	54	KBY15_IMG_28044-13167.png	0.9253049	607	64831	3	
55	55	KBY15_IMG_17955-24453.png	0.95873165	4112	61070	257	
56	56	KBY15_IMG_28215-22059.png	0.9119663	1730	63472	231	
57	57	KBY15_IMG_27018-15903.png	0.9468367	1968	63347	33	
58	58	KBY15_IMG_15048-2736.png	0.9565708	1696	63686	73	
59	59	KBY15_IMG_7695-10089.png	0.93807817	6946	57673	311	
60	60	KBY15_IMG_12825-21546.png	0.9225829	7758	56476	754	
61	61	KBY15_IMG_19665-15903.png	0.78468907	82	65409	42	
62	62	KBY15_IMG_10431-4617.png	0.9359114	3001	62124	64	
63	63	KBY15_IMG_11286-4617.png	0.9623271	4036	61184	50	
64	64	KBY15_IMG_16416-4446.png	0.91964287	1236	64084	46	
65	65	KBY15_IMG_10602-3078.png	0.912596	2793	62208	21	
66	66	KBY15_IMG_27873-13167.png	0.9470491	1717	63627	91	
67	67	KBY15_IMG_28557-22914.png	0.94361854	3364	61770	129	
68	68	KBY15_IMG_12825-21204.png	0.90722334	2738	62238	15	
69	69	KBY15_IMG_7182-16587.png	0.9334686	7359	57128	75	
70	70	KBY15_IMG_30267-12825.png	0.9251223	5010	59715	31	
71	71	KBY15_IMG_10944-4959.png	0.92381024	6493	57972	277	
72	72	KBY15_IMG_29241-23769.png	0.94961476	7209	57562	71	
73	73	KBY15_IMG_15219-2052.png	0.96117294	3540	61710	83	
74	74	KBY15_IMG_6840-16416.png	nan	0	65523	11	
75	75	KBY15_IMG_27873-12996.png	0.95859355	4989	60116	127	
76	76	KBY15_IMG_28728-11970.png	0.95415443	4714	60369	116	
77	77	KBY15_IMG_29241-22914.png	0.9197688	3978	60864	57	
78	78	KBY15_IMG_27702-11457.png	0.9573805	3684	61524	87	
79	79	KBY15_IMG_15732-2907.png	0.04016064	5	65292	15	
80	80	KBY15_IMG_2565-17613.png	0.90304244	15093	47202	13	
81	81	KBY15_IMG_23769-19323.png	0.9699072	16776	47719	132	

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative	False_Positive
82	82	KBY15_IMG_14877-2565.png	0.94702667	3647	61481	50	35	
83	83	KBY15_IMG_15561-2565.png	0.426452	1351	60551	81	35	
84	84	KBY15_IMG_19836-22743.png	0.95095664	5691	59258	79	50	
85	85	KBY15_IMG_2907-14706.png	0.9595828	8464	56359	125	58	
86	86	KBY15_IMG_9405-5301.png	0.9404767	9567	54758	566	64	
87	87	KBY15_IMG_29070-11970.png	0.56410253	22	65480	31	3	
88	88	KBY15_IMG_29412-22914.png	0.93706095	6536	58122	101	77	
89	89	KBY15_IMG_7524-8550.png	0.9728884	1866	63566	34	70	
90	90	KBY15_IMG_13851-22401.png	0.96459097	790	64688	18	40	
91	91	KBY15_IMG_17955-24624.png	0.9677973	15808	48676	113	93	
92	92	KBY15_IMG_14364-22743.png	nan	0	65523	11	2	
93	93	KBY15_IMG_30951-21717.png	0.973898	10130	54863	34	50	
94	94	KBY15_IMG_31806-22230.png	0.39130437	9	65499	24	4	
95	95	KBY15_IMG_3933-13167.png	0.91929334	7233	57033	8	12	
96	96	KBY15_IMG_6669-9918.png	0.9196076	7218	57056	79	11	
97	97	KBY15_IMG_11970-4446.png	0.95488584	10329	54231	312	66	
98	98	KBY15_IMG_16074-21717.png	0.96519256	3383	61909	36	20	
99	99	KBY15_IMG_15390-22743.png	0.95305765	4426	60674	256	18	
100	100	KBY15_IMG_3762-13509.png	0.94883525	8920	55654	197	76	
101	101	KBY15_IMG_14877-22572.png	0.93970543	6764	57904	57	81	
102	102	KBY15_IMG_3078-17613.png	0.9826798	4085	61307	5	13	
103	103	KBY15_IMG_12654-21204.png	0.9675747	11011	53787	6	73	
104	104	KBY15_IMG_10773-10773.png	nan	0	65232	2	30	
105	105	KBY15_IMG_15390-2736.png	0.9540011	10318	54223	93	90	
106	106	KBY15_IMG_7353-16074.png	0.6848249	176	65198	78	84	
107	107	KBY15_IMG_9918-13338.png	0.9074403	2549	62467	483	37	
108	108	KBY15_IMG_13509-22572.png	0.41176468	7	65509	13	7	
109	109	KBY15_IMG_29241-12825.png	0.95718724	10631	53954	371	58	

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		id	png	Dice_score	True_Positive	True_Negative	False_Negat
110	110	KBY15_IMG_9918-3762.png	0.9575758	474	65020	4	
111	111	KBY15_IMG_7353-17100.png	0.04878049	1	65496	5	
112	112	KBY15_IMG_15048-3591.png	0.95774245	3343	61898	45	
113	113	KBY15_IMG_28044-12312.png	0.9678575	16215	48244	219	
114	114	KBY15_IMG_12825-21888.png	0.8836478	3091	61631	75	
115	115	KBY15_IMG_30438-23940.png	0.73829204	402	64849	234	
116	116	KBY15_IMG_29070-12483.png	0.97026414	8761	56238	3	
117	117	KBY15_IMG_17955-25650.png	0.9397591	3315	61796	55	
118	118	KBY15_IMG_20349-15561.png	0.93745196	21942	40666	72	
119	119	KBY15_IMG_12825-10602.png	0.96524966	2861	62469	96	
120	120	KBY15_IMG_14364-3420.png	0.92193514	6708	57692	210	
121	121	KBY15_IMG_29070-12996.png	0.96112275	3424	61835	28	
122	122	KBY15_IMG_7524-9063.png	0.8621416	2045	62837	40	
123	123	KBY15_IMG_32490-23256.png	0.9721355	4361	60925	199	
124	124	KBY15_IMG_28386-22059.png	0.923222	6361	58117	69	
125	125	KBY15_IMG_22914-9405.png	0.9527763	7344	57464	302	
126	126	KBY15_IMG_27360-27189.png	0.85088885	4140	59945	817	
127	127	KBY15_IMG_31977-22230.png	0.963339	854	64617	8	
128	128	KBY15_IMG_24624-17955.png	0.680604	1172	63264	80	
129	129	KBY15_IMG_13338-21888.png	0.94405484	8952	55523	67	
130	130	KBY15_IMG_12996-21375.png	0.94005686	5285	59577	246	
131	131	KBY15_IMG_28728-11457.png	0.935053	1015	64380	50	
132	132	KBY15_IMG_12483-21033.png	0.9517846	2280	63025	175	
133	133	KBY15_IMG_11115-10773.png	0.97388035	6208	58995	35	
134	134	KBY15_IMG_11115-4446.png	0.9329437	6706	57866	126	
135	135	KBY15_IMG_7866-16758.png	0.9807042	10292	54839	72	

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[Kalobeyei] EfficientNet B2 U-Net (ImageNet)

	id	png	Dice_score	True_Positive	True_Negative	False_Negative	F
0	0	KBY15_IMG_29925-23256.png	0.7859143	2946	60985	119	1
1	1	KBY15_IMG_3078-14535.png	0.97293305	11862	53014	179	4
2	2	KBY15_IMG_11286-9747.png	0.8728411	4321	59956	4	1
3	3	KBY15_IMG_3933-13509.png	0.9137779	6735	57530	86	1
4	4	KBY15_IMG_19836-15732.png	0.9400852	6182	58566	333	4
5	5	KBY15_IMG_30780-24282.png	0.8875244	6360	57564	971	6
6	6	KBY15_IMG_4104-13167.png	0.9081253	6583	57621	388	9
7	7	KBY15_IMG_7182-9918.png	0.97629005	10150	54893	261	2
8	8	KBY15_IMG_7524-9405.png	0.9096478	594	64824	42	7
9	9	KBY15_IMG_9747-4104.png	0.93691206	2042	63219	43	2
10	10	KBY15_IMG_29583-12483.png	0.968487	21759	42361	255	1
11	11	KBY15_IMG_12825-7695.png	0.9412362	7416	57194	253	6
12	12	KBY15_IMG_14877-22743.png	0.9204041	1139	64200	192	5
13	13	KBY15_IMG_14193-3249.png	0.9083698	6528	57691	1118	1
14	14	KBY15_IMG_20178-22914.png	0.9537438	3299	61917	71	2
15	15	KBY15_IMG_8037-16416.png	0.96895444	16214	48283	220	8
16	16	KBY15_IMG_19836-15903.png	0.4197063	1329	60532	103	3
17	17	KBY15_IMG_23256-18810.png	0.9128769	2740	62273	13	5
18	18	KBY15_IMG_20520-23085.png	0.9560638	7170	57707	110	5
19	19	KBY15_IMG_12483-21717.png	0.94375473	7450	57198	289	5
20	20	KBY15_IMG_10602-3762.png	0.92350006	7219	57121	22	1
21	21	KBY15_IMG_32661-24282.png	0.91366905	254	65234	23	2
22	22	KBY15_IMG_30096-12654.png	0.7681962	971	63979	89	4
23	23	KBY15_IMG_27702-27189.png	0.9715974	22201	42037	149	1
24	24	KBY15_IMG_28557-24111.png	0.9663443	2498	62864	78	9
25	25	KBY15_IMG_13509-22401.png	0.88883144	1719	63387	11	4
26	26	KBY15_IMG_7011-10431.png	0.73438656	1999	62091	362	1

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		id	png	Dice_score	True_Positive	True_Negative	False_Nega
27	27	KBY15_IMG_14535-22914.png	0.9874296	13079	52124	94	
28	28	KBY15_IMG_7524-17271.png	0.9771185	16697	48057	211	
29	29	KBY15_IMG_7695-15903.png	0.9638638	11016	53694	1	
30	30	KBY15_IMG_15048-2223.png	0.79977375	2121	62353	354	
31	31	KBY15_IMG_11970-3762.png	0.98646367	8745	56551	19	
32	32	KBY15_IMG_30438-24111.png	0.8768776	3561	60975	738	
33	33	KBY15_IMG_19836-16416.png	0.9634672	6369	58684	61	
34	34	KBY15_IMG_13680-22401.png	0.9566678	10255	54352	386	
35	35	KBY15_IMG_23085-9234.png	0.91922134	3943	60900	92	
36	36	KBY15_IMG_22743-9576.png	0.9778465	15802	49018	119	
37	37	KBY15_IMG_10773-3420.png	0.93997836	2169	63090	114	
38	38	KBY15_IMG_13680-20520.png	0.9256866	573	64871	37	
39	39	KBY15_IMG_20007-23598.png	0.94180703	615	64845	13	
40	40	KBY15_IMG_10773-2907.png	0.9503842	5009	60004	1	
41	41	KBY15_IMG_7011-16245.png	0.86068964	4368	59754	589	
42	42	KBY15_IMG_7011-9918.png	0.95589507	3316	61914	56	
43	43	KBY15_IMG_3591-14877.png	0.89912695	16735	45046	2928	
44	44	KBY15_IMG_3078-16929.png	0.9778577	4350	60989	23	
45	45	KBY15_IMG_3249-14706.png	0.9447715	1685	63654	123	
46	46	KBY15_IMG_14877-3420.png	0.97865766	10134	54960	30	
47	47	KBY15_IMG_23256-18468.png	nan	0	65173	2	
48	48	KBY15_IMG_7353-16929.png	0.928523	2741	62373	0	
49	49	KBY15_IMG_6669-16587.png	0.97653115	6075	59169	168	
50	50	KBY15_IMG_19836-16074.png	0.9516283	3974	61158	112	
51	51	KBY15_IMG_14877-2394.png	0.9593718	8430	56392	159	
52	52	KBY15_IMG_12996-7353.png	0.9298527	6946	57542	498	
53	53	KBY15_IMG_14706-23085.png	0.95409286	3689	61492	82	
54	54	KBY15_IMG_28044-13167.png	0.9614562	4939	60201	177	

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative	F1
55	55	KBY15_IMG_17955-24453.png	0.92846525	2187	63012	268		66
56	56	KBY15_IMG_28215-22059.png	0.93371177	2796	62343	18		33
57	57	KBY15_IMG_27018-15903.png	0.9616374	4487	60691	197		11
58	58	KBY15_IMG_15048-2736.png	nan	0	65531	2		33
59	59	KBY15_IMG_7695-10089.png	0.9514468	10670	53777	332		77
60	60	KBY15_IMG_12825-21546.png	0.9538273	4679	60404	151		33
61	61	KBY15_IMG_19665-15903.png	0.94756377	6894	57879	39		77
62	62	KBY15_IMG_10431-4617.png	0.9680163	2845	62503	112		77
63	63	KBY15_IMG_11286-4617.png	0.91787773	5242	59356	87		88
64	64	KBY15_IMG_16416-4446.png	0.9391436	6821	57831	543		33
65	65	KBY15_IMG_10602-3078.png	0.9327755	6688	57884	144		88
66	66	KBY15_IMG_27873-13167.png	0.87136364	3160	61443	6		99
67	67	KBY15_IMG_28557-22914.png	0.9802868	10219	54906	145		22
68	68	KBY15_IMG_12825-21204.png	nan	0	65267	11		22
69	69	KBY15_IMG_7182-16587.png	0.9777671	4068	61283	22		11
70	70	KBY15_IMG_30267-12825.png	0.94895375	3560	61593	127		22
71	71	KBY15_IMG_10944-4959.png	0.96498364	17210	47077	621		66
72	72	KBY15_IMG_29241-23769.png	0.9427793	1211	64178	71		77
73	73	KBY15_IMG_15219-2052.png	0.9601622	3314	61947	74		22
74	74	KBY15_IMG_6840-16416.png	0.96357346	3624	61638	73		22
75	75	KBY15_IMG_27873-12996.png	0.9426357	1216	64172	38		11
76	76	KBY15_IMG_28728-11970.png	0.9486095	5270	59695	261		33
77	77	KBY15_IMG_29241-22914.png	0.9480045	3373	61793	120		22
78	78	KBY15_IMG_27702-11457.png	0.6807048	792	64001	8		77
79	79	KBY15_IMG_15732-2907.png	0.90072715	7989	55786	158		11
80	80	KBY15_IMG_2565-17613.png	0.93268186	1718	63570	157		99
81	81	KBY15_IMG_23769-19323.png	0.97501653	8820	56264	199		22
82	82	KBY15_IMG_14877-2565.png	0.9389665	15046	48534	60		11

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		id	png	Dice_score	True_Positive	True_Negative	False_Nega
83	83		KBY15_IMG_15561-2565.png	0.9127102	3989	60784	357
84	84		KBY15_IMG_19836-22743.png	0.95922226	3552	61682	71
85	85		KBY15_IMG_2907-14706.png	0.95722467	2842	62440	132
86	86		KBY15_IMG_9405-5301.png	0.8661088	207	65265	50
87	87		KBY15_IMG_29070-11970.png	0.2580645	4	65509	19
88	88		KBY15_IMG_29412-22914.png	0.9372315	9489	54776	644
89	89		KBY15_IMG_7524-8550.png	0.120370366	13	65333	7
90	90		KBY15_IMG_13851-22401.png	0.93188787	1977	63270	24
91	91		KBY15_IMG_17955-24624.png	0.95439255	4112	61031	257
92	92		KBY15_IMG_14364-22743.png	0.86634356	5004	58988	37
93	93		KBY15_IMG_30951-21717.png	0.9447506	6515	58259	122
94	94		KBY15_IMG_31806-22230.png	0.9399815	1018	64388	47
95	95		KBY15_IMG_3933-13167.png	0.920624	6698	57683	220
96	96		KBY15_IMG_6669-9918.png	0.9385661	6768	57882	489
97	97		KBY15_IMG_11970-4446.png	0.9547117	1697	63678	72
98	98		KBY15_IMG_16074-21717.png	0.95185363	7908	56828	362
99	99		KBY15_IMG_15390-22743.png	0.865797	4845	59189	345
100	100		KBY15_IMG_3762-13509.png	0.035087723	1	65480	52
101	101		KBY15_IMG_14877-22572.png	0.94672936	12085	52091	361
102	102		KBY15_IMG_3078-17613.png	0.9594409	7345	57570	58
103	103		KBY15_IMG_12654-21204.png	0.93806887	7369	57194	65
104	104		KBY15_IMG_10773-10773.png	0.59437746	74	65361	97
105	105		KBY15_IMG_15390-2736.png	0.9540347	467	65024	11
106	106		KBY15_IMG_7353-16074.png	0.972592	1863	63568	37
107	107		KBY15_IMG_9918-13338.png	0.65036863	838	63797	24
108	108		KBY15_IMG_13509-22572.png	0.9654766	1636	63783	41
109	109		KBY15_IMG_29241-12825.png	0.1459854	10	65409	114
110	110		KBY15_IMG_9918-3762.png	0.9691338	1460	63983	37

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				Dice_score	True_Positive	True_Negative	False_Negative	F1
111	111	KBY15_IMG_7353-17100.png		0.9026676	2504	62492	528	1
112	112	KBY15_IMG_15048-3591.png		0.95655096	5702	59316	68	4
113	113	KBY15_IMG_28044-12312.png		0.9041591	4750	59779	19	9
114	114	KBY15_IMG_12825-21888.png		0.96706194	4404	60832	156	1
115	115	KBY15_IMG_30438-23940.png		0.95067817	771	64685	37	4
116	116	KBY15_IMG_29070-12483.png		0.8312122	6466	56444	2046	5
117	117	KBY15_IMG_17955-25650.png		0.9576712	16844	47203	527	9
118	118	KBY15_IMG_20349-15561.png		nan	0	65505	11	2
119	119	KBY15_IMG_12825-10602.png		0.95259595	4431	60664	251	1
120	120	KBY15_IMG_14364-3420.png		0.61372304	483	64445	112	4
121	121	KBY15_IMG_29070-12996.png		0.75409836	23	65498	10	5
122	122	KBY15_IMG_7524-9063.png		0.94467974	7249	57438	484	3
123	123	KBY15_IMG_32490-23256.png		0.94435096	8417	56127	700	2
124	124	KBY15_IMG_28386-22059.png		0.9658083	3319	61982	100	1
125	125	KBY15_IMG_22914-9405.png		0.9305912	5611	59088	35	8
126	126	KBY15_IMG_27360-27189.png		0.95839185	3409	61831	43	2
127	127	KBY15_IMG_31977-22230.png		0.91866153	7234	57021	63	1
128	128	KBY15_IMG_24624-17955.png		0.30769232	2	65525	4	5
129	129	KBY15_IMG_13338-21888.png		0.6777143	1186	63222	66	1
130	130	KBY15_IMG_12996-21375.png		0.75107294	175	65245	79	3
131	131	KBY15_IMG_28728-11457.png		0.9283759	2035	63187	3	3
132	132	KBY15_IMG_12483-21033.png		0.93281025	6539	58055	231	7
133	133	KBY15_IMG_11115-10773.png		0.45746163	1804	59453	157	4
134	134	KBY15_IMG_11115-4446.png		0.92894584	6380	58180	117	8
135	135	KBY15_IMG_7866-16758.png		0.41379312	6	65513	14	3

[Kalobeyei] EfficientNet B2 U-Net (No ImageNet)

	id	png	Dice_score	True_Positive	True_Negative	False_Negat
0	0	KBY15_IMG_29925-23256.png	0.9356691	6516	58124	121
1	1	KBY15_IMG_3078-14535.png	0.8425176	4839	58888	351
2	2	KBY15_IMG_11286-9747.png	0.9577077	4178	60989	191
3	3	KBY15_IMG_3933-13509.png	0.9065097	3927	60799	108
4	4	KBY15_IMG_19836-15732.png	0.93435	6739	57850	194
5	5	KBY15_IMG_30780-24282.png	0.93475795	2056	63193	29
6	6	KBY15_IMG_4104-13167.png	0.94012094	7230	57385	50
7	7	KBY15_IMG_7182-9918.png	0.91257095	5626	58832	20
8	8	KBY15_IMG_7524-9405.png	0.9564516	593	64889	17
9	9	KBY15_IMG_9747-4104.png	0.90929455	2030	63101	8
10	10	KBY15_IMG_29583-12483.png	0.90888023	3137	61770	550
11	11	KBY15_IMG_12825-7695.png	0.94102263	6837	57842	527
12	12	KBY15_IMG_14877-22743.png	0.5739437	1141	62701	1334
13	13	KBY15_IMG_14193-3249.png	0.71717167	71	65409	53
14	14	KBY15_IMG_20178-22914.png	0.95728326	4919	60178	197
15	15	KBY15_IMG_8037-16416.png	0.889266	1048	64227	234
16	16	KBY15_IMG_19836-15903.png	0.925977	1007	64368	58
17	17	KBY15_IMG_23256-18810.png	0.91829175	4709	59989	60
18	18	KBY15_IMG_20520-23085.png	0.8681592	3141	61441	25
19	19	KBY15_IMG_12483-21717.png	0.8804071	519	64876	117
20	20	KBY15_IMG_10602-3762.png	0.874671	4320	59978	5
21	21	KBY15_IMG_32661-24282.png	0.9415835	12113	51920	333
22	22	KBY15_IMG_30096-12654.png	0.774019	858	64177	4
23	23	KBY15_IMG_27702-27189.png	0.95836556	8655	56129	364
24	24	KBY15_IMG_28557-24111.png	0.93009114	1989	63248	12
25	25	KBY15_IMG_13509-22401.png	0.9166875	7339	56863	330

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative	False_Positive
26	26	KBY15_IMG_7011-10431.png	0.9352997	9418	54815	715	58	
27	27	KBY15_IMG_14535-22914.png	0.8714087	5960	57817	1337	42	
28	28	KBY15_IMG_7524-17271.png	0.9531933	4470	60627	214	22	
29	29	KBY15_IMG_7695-15903.png	0.9394285	6165	58576	350	44	
30	30	KBY15_IMG_15048-2223.png	0.97439134	6183	59028	60	26	
31	31	KBY15_IMG_11970-3762.png	0.958234	22117	41491	233	16	
32	32	KBY15_IMG_30438-24111.png	0.9754044	10311	54705	100	42	
33	33	KBY15_IMG_19836-16416.png	0.9329744	6584	58006	186	76	
34	34	KBY15_IMG_13680-22401.png	0.71274614	1918	62072	443	11	
35	35	KBY15_IMG_23085-9234.png	0.07017545	2	65481	51	2	
36	36	KBY15_IMG_22743-9576.png	0.8728265	4317	59961	640	61	
37	37	KBY15_IMG_10773-3420.png	0.74125284	5254	56614	3258	41	
38	38	KBY15_IMG_13680-20520.png	0.9621964	3347	61926	41	22	
39	39	KBY15_IMG_20007-23598.png	0.9595051	1706	63686	63	81	
40	40	KBY15_IMG_10773-2907.png	0.9342963	4657	60224	173	48	
41	41	KBY15_IMG_7011-16245.png	0.94654465	7499	57190	240	60	
42	42	KBY15_IMG_7011-9918.png	0.8881465	7976	55551	171	18	
43	43	KBY15_IMG_3591-14877.png	0.9133975	617	64802	11	10	
44	44	KBY15_IMG_3078-16929.png	0.8923367	6614	57326	357	12	
45	45	KBY15_IMG_3249-14706.png	0.972732	1855	63577	45	59	
46	46	KBY15_IMG_14877-3420.png	0.9522581	1476	63912	21	12	
47	47	KBY15_IMG_23256-18468.png	0.9388327	1673	63645	135	83	
48	48	KBY15_IMG_7353-16929.png	0.9354577	5196	59623	335	38	
49	49	KBY15_IMG_6669-16587.png	0.96730906	15860	48604	61	10	
50	50	KBY15_IMG_19836-16074.png	0.89646107	4433	60079	127	89	
51	51	KBY15_IMG_14877-2394.png	0.982406	13066	52002	107	36	
52	52	KBY15_IMG_12996-7353.png	0.30769232	4	65514	16	2	
53	53	KBY15_IMG_14706-23085.png	0.9513555	7334	57452	69	68	

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		id	png	Dice_score	True_Positive	True_Negative	False_Negat
54	54	KBY15_IMG_28044-13167.png	0.9180981	6681	57663	237	
55	55	KBY15_IMG_17955-24453.png	0.6682578	140	65257	137	
56	56	KBY15_IMG_28215-22059.png	0.88489735	2414	62494	618	
57	57	KBY15_IMG_27018-15903.png	0.65283126	1101	63264	151	
58	58	KBY15_IMG_15048-2736.png	0.9477677	4373	60681	309	
59	59	KBY15_IMG_7695-10089.png	0.94059414	475	65001	3	
60	60	KBY15_IMG_12825-21546.png	0.42811087	1328	60660	104	
61	61	KBY15_IMG_19665-15903.png	0.9111372	6598	57651	1048	
62	62	KBY15_IMG_10431-4617.png	0.9492205	6393	58459	37	
63	63	KBY15_IMG_11286-4617.png	0.95539606	10517	54037	485	
64	64	KBY15_IMG_16416-4446.png	0.92871976	3355	61666	138	
65	65	KBY15_IMG_10602-3078.png	0.9696232	8762	56225	2	
66	66	KBY15_IMG_27873-13167.png	0.9260778	7003	57415	441	
67	67	KBY15_IMG_28557-22914.png	0.87136227	1033	64198	298	
68	68	KBY15_IMG_12825-21204.png	0.95510125	4999	60067	11	
69	69	KBY15_IMG_7182-16587.png	0.93024063	21536	40770	478	
70	70	KBY15_IMG_30267-12825.png	0.90253675	6760	57316	61	
71	71	KBY15_IMG_10944-4959.png	0.9368462	7165	57405	568	
72	72	KBY15_IMG_29241-23769.png	0.95117545	789	64666	19	
73	73	KBY15_IMG_15219-2052.png	0.9211832	15042	47920	64	
74	74	KBY15_IMG_6840-16416.png	nan	0	65513	20	
75	75	KBY15_IMG_27873-12996.png	0.713398	2870	60360	195	
76	76	KBY15_IMG_28728-11970.png	0.39156625	65	65269	189	
77	77	KBY15_IMG_29241-22914.png	nan	0	65194	2	
78	78	KBY15_IMG_27702-11457.png	0.96579885	2838	62497	119	
79	79	KBY15_IMG_15732-2907.png	0.93331856	8433	55898	684	
80	80	KBY15_IMG_2565-17613.png	nan	0	65510	23	
81	81	KBY15_IMG_23769-19323.png	0.855946	5006	58845	35	

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative	Fa
82	82	KBY15_IMG_14877-2565.png	nan	0	65516	11	9	
83	83	KBY15_IMG_15561-2565.png	0.9612786	10886	53773	131	74	
84	84	KBY15_IMG_19836-22743.png	0.92789304	6595	57916	662	36	
85	85	KBY15_IMG_2907-14706.png	0.9562707	3313	61920	59	24	
86	86	KBY15_IMG_9405-5301.png	0.9207103	5237	59397	92	81	
87	87	KBY15_IMG_29070-11970.png	nan	0	65516	11	9	
88	88	KBY15_IMG_29412-22914.png	0.20000002	4	65500	29	3	
89	89	KBY15_IMG_7524-8550.png	0.9689191	16117	48385	317	71	
90	90	KBY15_IMG_13851-22401.png	0.9485332	10201	54228	440	66	
91	91	KBY15_IMG_17955-24624.png	0.9569082	2476	62837	100	12	
92	92	KBY15_IMG_14364-22743.png	0.6657754	747	64039	53	69	
93	93	KBY15_IMG_30951-21717.png	0.928356	1231	64115	23	16	
94	94	KBY15_IMG_31806-22230.png	nan	0	65531	2	3	
95	95	KBY15_IMG_3933-13167.png	0.93874943	7349	57228	85	87	
96	96	KBY15_IMG_6669-9918.png	0.92492956	7220	57144	21	11	
97	97	KBY15_IMG_11970-4446.png	0.8750149	3672	60815	627	42	
98	98	KBY15_IMG_16074-21717.png	0.81207883	13917	45178	5746	69	
99	99	KBY15_IMG_15390-22743.png	0.8363636	207	65248	50	31	
100	100	KBY15_IMG_3762-13509.png	0.81875473	5457	57663	1874	54	
101	101	KBY15_IMG_14877-22572.png	0.9553744	5684	59321	86	44	
102	102	KBY15_IMG_3078-17613.png	0.932618	2173	63049	110	20	
103	103	KBY15_IMG_12654-21204.png	0.608	76	65362	95	3	
104	104	KBY15_IMG_10773-10773.png	0.9744653	16677	47985	231	64	
105	105	KBY15_IMG_15390-2736.png	0.9710069	10131	54800	33	57	
106	106	KBY15_IMG_7353-16074.png	0.9468865	3619	61511	152	25	
107	107	KBY15_IMG_9918-13338.png	0.68825907	1020	63592	40	88	
108	108	KBY15_IMG_13509-22572.png	0.9214368	2809	62248	5	47	
109	109	KBY15_IMG_29241-12825.png	0.94217247	3951	61100	135	35	

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		id	png	Dice_score	True_Positive	True_Negative	False_Negat
110	110	KBY15_IMG_9918-3762.png	0.93358314	2741	62405	0	
111	111	KBY15_IMG_7353-17100.png	0.9294538	1693	63586	182	
112	112	KBY15_IMG_15048-3591.png	0.5836711	504	64313	91	
113	113	KBY15_IMG_28044-12312.png	0.96206284	1623	63785	54	
114	114	KBY15_IMG_12825-21888.png	0.97592837	10237	54794	127	
115	115	KBY15_IMG_30438-23940.png	0.93996465	3194	61934	176	
116	116	KBY15_IMG_29070-12483.png	0.92793524	1719	63550	11	
117	117	KBY15_IMG_17955-25650.png	0.97430384	4076	61245	14	
118	118	KBY15_IMG_20349-15561.png	0.95739347	2865	62416	109	
119	119	KBY15_IMG_12825-10602.png	0.9566349	3309	61927	110	
120	120	KBY15_IMG_14364-3420.png	0.95184875	8431	56252	158	
121	121	KBY15_IMG_29070-12996.png	0.9421168	3654	61433	43	
122	122	KBY15_IMG_7524-9063.png	0.90809554	2737	62245	16	
123	123	KBY15_IMG_32490-23256.png	0.933119	6676	57903	156	
124	124	KBY15_IMG_28386-22059.png	0.9616436	17249	46911	582	
125	125	KBY15_IMG_22914-9405.png	0.956764	16829	47186	542	
126	126	KBY15_IMG_27360-27189.png	0.9194734	6320	58109	177	
127	127	KBY15_IMG_31977-22230.png	0.9396534	2250	62997	205	
128	128	KBY15_IMG_24624-17955.png	0.9623322	11752	52864	289	
129	129	KBY15_IMG_13338-21888.png	0.920207	3823	61050	523	
130	130	KBY15_IMG_12996-21375.png	0.9567005	3491	61729	132	
131	131	KBY15_IMG_28728-11457.png	0.9645861	4358	60858	15	
132	132	KBY15_IMG_12483-21033.png	0.9629629	3393	61882	59	
133	133	KBY15_IMG_11115-10773.png	0.5143263	1813	60299	148	
134	134	KBY15_IMG_11115-4446.png	0.9401384	7884	56648	386	
135	135	KBY15_IMG_7866-16758.png	0.4	2	65528	4	

[All dataset] 4-layer U-Net

	id	png	Dice_score	True_Positive	True_Negative	False_Negative
0	0	DZK15_IMG_7695-3762.png	0.7346395	1931	62210	430
1	1	DZKN15_IMG_6840-2907.png	0.5194805	60	65365	111
2	2	DZK15_IMG_6840-3078.png	nan	0	65430	2
3	3	DZK15_IMG_7524-3249.png	0.7297232	19735	31182	4774
4	4	KBY15_IMG_29925-23256.png	0.8116881	26153	27248	1718
5	5	KBY15_IMG_3078-14535.png	0.92103684	36153	23184	1073
6	6	DZK15_IMG_8037-4104.png	0.6827341	864	63869	122
7	7	DZK15_IMG_3249-8208.png	0.89832944	7179	56732	62
8	8	DZKN15_IMG_5985-3762.png	0.761159	972	63954	197
9	9	KBY15_IMG_11286-9747.png	0.8616815	31136	24404	1283
10	10	DZKN15_IMG_4617-5643.png	0.8407915	16741	42455	2410
11	11	DZK15_IMG_1197-9918.png	0.7332275	6694	53971	529
12	12	DZK15_IMG_4446-7182.png	0.8779238	37853	17156	871
13	13	DZK15_IMG_3591-9918.png	0.933914	34418	26247	1507
14	14	DZK15_IMG_2736-10260.png	0.76832664	16733	38712	1577
15	15	KBY15_IMG_3933-13509.png	0.9250694	28500	32419	2174
16	16	DZK15_IMG_7524-5985.png	0.8343206	31831	21063	2278
17	17	DZK15_IMG_5985-10773.png	0.9073236	47277	8601	1864
18	18	DZK15_IMG_3933-8721.png	0.9273901	4598	60218	232
19	19	DZKN15_IMG_5643-684.png	0.89879817	1421	63795	80
20	20	KBY15_IMG_19836-15732.png	0.8395892	22972	33786	4553
21	21	DZK15_IMG_7866-3078.png	0.8442426	19979	38185	558
22	22	DZK15_IMG_7524-7182.png	0.8836913	2777	62028	288
23	23	DZK15_IMG_2394-13680.png	0.93726593	5005	59861	36
24	24	DZKN15_IMG_7866-4788.png	0.8824684	20464	39621	918
25	25	DZK15_IMG_7353-1539.png	0.81784755	24241	30497	9102

		id	png	Dice_score	True_Positive	True_Negative	False_Neg
26	26	KBY15_IMG_30780-24282.png	0.80368024	24720	28739	82	
27	27	DZK15_IMG_7182-7866.png	0.97359276	15964	48706	470	
28	28	KBY15_IMG_4104-13167.png	0.85987306	31765	23418	2790	
29	29	KBY15_IMG_7182-9918.png	0.81736463	8821	52773	127	
30	30	KBY15_IMG_7524-9405.png	0.9557095	4758	60337	358	
31	31	DZK15_IMG_3420-12312.png	0.82182854	20180	36606	5817	
32	32	DZK15_IMG_3933-10602.png	0.9490922	5593	59343	53	
33	33	DZK15_IMG_2223-2736.png	0.95726496	4088	61083	281	
34	34	KBY15_IMG_9747-4104.png	0.7161637	4794	56942	5	
35	35	DZK15_IMG_3591-6156.png	0.80176485	15992	41636	818	
36	36	DZK15_IMG_3078-4446.png	0.6570809	7266	50686	2004	
37	37	DZK15_IMG_4788-9234.png	0.9243539	24054	37545	647	
38	38	KBY15_IMG_29583-12483.png	0.90294415	30608	28348	2386	
39	39	DZKN15_IMG_6669-3249.png	0.8695954	32552	23221	2849	
40	40	DZK15_IMG_2736-11286.png	nan	0	65344	192	
41	41	DZK15_IMG_3762-7182.png	0.87381136	35333	19998	1269	
42	42	DZKN15_IMG_5814-4788.png	0.94296473	6638	58095	726	
43	43	DZK15_IMG_5301-2394.png	0.8977681	4123	60474	595	
44	44	DZK15_IMG_2223-9576.png	0.93351966	4676	60194	93	
45	45	KBY15_IMG_12825-7695.png	0.92664605	13820	49528	677	
46	46	DZK15_IMG_4788-8721.png	0.926046	34980	24969	1725	
47	47	DZK15_IMG_8550-4959.png	0.6985401	3134	59697	32	
48	48	DZK15_IMG_4104-7353.png	0.9363853	15095	48390	11	
49	49	DZK15_IMG_1368-6327.png	0.94433475	6455	58320	315	
50	50	DZKN15_IMG_6156-4104.png	0.8390565	11240	49984	784	
51	51	DZK15_IMG_5814-3078.png	0.8285141	9699	51822	86	
52	52	KBY15_IMG_14877-22743.png	0.8054298	8900	52336	431	
53	53	DZK15_IMG_4959-2907.png	0.7923524	23063	30385	3301	

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative
54	54		KBY15_IMG_14193-3249.png	0.5764576	4454	54537	352
55	55		KBY15_IMG_20178-22914.png	0.7860338	28906	20893	905
56	56		KBY15_IMG_8037-16416.png	0.95452213	13947	50260	215
57	57		KBY15_IMG_19836-15903.png	nan	0	65530	6
58	58		DZK15_IMG_3249-13509.png	0.8574513	9531	52836	1425
59	59		KBY15_IMG_23256-18810.png	0.9868766	8272	57044	102
60	60		DZK15_IMG_4617-5301.png	0.93379444	6615	57983	217
61	61		DZK15_IMG_3420-3249.png	0.893827	15124	46819	906
62	62		DZK15_IMG_6840-4617.png	0.92036134	14365	48685	75
63	63		DZK15_IMG_1197-8208.png	0.8856144	6581	57255	863
64	64		KBY15_IMG_20520-23085.png	0.88343996	5044	59161	173
65	65		DZK15_IMG_4446-2565.png	0.89013684	2536	62374	306
66	66		KBY15_IMG_12483-21717.png	0.9387596	39802	20541	1074
67	67		KBY15_IMG_10602-3762.png	0.60741496	1794	61423	47
68	68		DZKN15_IMG_8379-4959.png	0.97944516	4360	60993	13
69	69		DZKN15_IMG_7182-4275.png	0.7635985	4766	57819	347
70	70		KBY15_IMG_32661-24282.png	0.93187153	7140	57352	593
71	71		DZK15_IMG_3420-8892.png	0.89089113	4499	59935	18
72	72		DZK15_IMG_4788-11628.png	0.2857143	4	65512	16
73	73		KBY15_IMG_30096-12654.png	0.95035464	1005	64426	60
74	74		DZK15_IMG_2736-14022.png	0.8778301	3916	60530	1
75	75		KBY15_IMG_27702-27189.png	0.81703126	28889	23708	677
76	76		KBY15_IMG_28557-24111.png	0.76904756	11946	46415	767
77	77		DZK15_IMG_3420-12483.png	0.8579592	5705	57942	167
78	78		DZK15_IMG_3420-5814.png	0.96321774	3221	62069	149
79	79		DZK15_IMG_2223-11457.png	0.8254934	23884	31554	4377
80	80		DZK15_IMG_3420-8721.png	0.9208811	10033	53779	608
81	81		DZK15_IMG_7182-3762.png	0.87608975	30399	26538	2035

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		id	png	Dice_score	True_Positive	True_Negative	False_Neg
82	82		DZK15_IMG_4275-4446.png	0.8842176	14449	47303	253
83	83		KBY15_IMG_13509-22401.png	0.93342584	35648	24803	654
84	84		DZK15_IMG_4788-11115.png	0.9390817	5195	59667	77
85	85		KBY15_IMG_7011-10431.png	0.97002727	1424	64024	73
86	86		DZKN15_IMG_1026-7011.png	0.60499823	1743	61517	49
87	87		DZKN15_IMG_8550-4275.png	0.95496786	16700	47261	671
88	88		DZK15_IMG_7695-2907.png	0.91906303	2413	62698	1
89	89		DZK15_IMG_5130-11457.png	0.84289014	32670	20687	1466
90	90		KBY15_IMG_14535-22914.png	0.9300045	8251	56043	360
91	91		DZK15_IMG_2394-10431.png	0.9186849	32261	27564	968
92	92		KBY15_IMG_7524-17271.png	0.7712209	4829	57842	0
93	93		KBY15_IMG_7695-15903.png	0.9637833	6919	58097	14
94	94		KBY15_IMG_15048-2223.png	0.8093747	26626	26368	716
95	95		DZK15_IMG_4275-4275.png	0.9217379	6725	57669	22
96	96		DZK15_IMG_6498-3420.png	0.34513566	1043	60535	17
97	97		DZK15_IMG_4104-12996.png	0.9592012	2786	62513	188
98	98		DZK15_IMG_3591-4275.png	0.8969725	33005	24949	1100
99	99		DZK15_IMG_2907-12825.png	0.95883644	1747	63639	128
100	100		DZK15_IMG_2565-5643.png	0.64843917	1506	62397	70
101	101		DZK15_IMG_7011-5472.png	0.82850224	9918	51512	448
102	102		DZK15_IMG_5301-3420.png	nan	0	65532	4
103	103		KBY15_IMG_11970-3762.png	0.97550285	2449	62964	99
104	104		DZK15_IMG_2565-11115.png	0.80320287	11034	49095	1651
105	105		DZK15_IMG_6156-3078.png	0.84151286	21682	35687	705
106	106		KBY15_IMG_30438-24111.png	0.97723645	10110	54955	254
107	107		DZK15_IMG_1539-12483.png	0.9298733	15229	48010	0
108	108		KBY15_IMG_19836-16416.png	0.6694099	2847	59877	17
109	109		KBY15_IMG_13680-22401.png	0.84995925	26605	29538	1995

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				Dice_score	True_Positive	True_Negative	False_Negative
110	110	DZK15_IMG_6156-1710.png		0.89410144	10997	51934	1776
111	111	DZK15_IMG_4275-9918.png		0.791753	20622	34066	1633
112	112	KBY15_IMG_23085-9234.png		0.9319037	6562	58015	356
113	113	DZK15_IMG_2907-10944.png		0.7949988	18535	37442	7085
114	114	DZK15_IMG_2907-3762.png		0.96989286	6749	58368	161
115	115	DZK15_IMG_2394-11799.png		0.8606265	4588	59462	85
116	116	DZK15_IMG_2736-9747.png		0.906757	6287	57956	19
117	117	DZK15_IMG_7353-6327.png		0.55352646	4395	54051	5954
118	118	DZK15_IMG_5643-3933.png		0.9391166	3540	61537	157
119	119	DZK15_IMG_3591-9405.png		0.86995494	20089	39441	438
120	120	DZK15_IMG_1368-10602.png		0.9735563	5007	60257	3
121	121	DZK15_IMG_5472-4446.png		0.7196517	9589	48476	1766
122	122	DZK15_IMG_2565-5130.png		0.8405522	32418	20819	5218
123	123	KBY15_IMG_22743-9576.png		0.9110132	35028	23665	1566
124	124	DZK15_IMG_4104-9405.png		0.9149294	18235	43910	7
125	125	KBY15_IMG_10773-3420.png		0.91510105	18022	44170	879
126	126	DZK15_IMG_8721-4446.png		0.8179571	993	64101	30
127	127	KBY15_IMG_13680-20520.png		0.6208664	4844	54776	485
128	128	KBY15_IMG_20007-23598.png		0.94876784	8528	56087	56
129	129	KBY15_IMG_10773-2907.png		0.76102614	24088	26320	1108
130	130	DZK15_IMG_5301-1368.png		0.792394	17273	39212	751
131	131	KBY15_IMG_7011-16245.png		0.86453027	25211	32424	1915
132	132	DZK15_IMG_4788-4446.png		0.93545026	7188	57356	481
133	133	DZKN15_IMG_6840-4617.png		0.9189518	8311	55759	18
134	134	DZK15_IMG_5985-8550.png		0.77596235	1401	63326	2
135	135	KBY15_IMG_7011-9918.png		0.88809735	19821	40720	725
136	136	DZK15_IMG_4104-1710.png		0.96489656	4824	60361	5
137	137	DZK15_IMG_7353-6156.png		0.86949223	32146	23740	4940

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		id	png	Dice_score	True_Positive	True_Negative	False_Neg
138	138		DZK15_IMG_1881-6156.png	0.26832297	108	64839	0
139	139		DZK15_IMG_6840-9063.png	0.9715823	15710	48907	211
140	140		DZKN15_IMG_2565-6498.png	0.87880576	36499	18970	387
141	141		DZK15_IMG_7011-7353.png	0.9590154	3896	61307	190
142	142		DZK15_IMG_5472-3420.png	0.85979486	30429	25183	1335
143	143		DZK15_IMG_5814-5814.png	0.9543349	6489	58426	148
144	144		DZKN15_IMG_6840-2736.png	0.7327187	9259	49522	1679
145	145		DZK15_IMG_6156-4446.png	0.86948854	986	64254	246
146	146		DZKN15_IMG_2052-4275.png	0.9813213	17416	47457	415
147	147		KBY15_IMG_3591-14877.png	0.0033496346	25	50634	59
148	148		DZK15_IMG_4275-2565.png	0.8545984	33922	20071	3805
149	149		DZKN15_IMG_1881-5472.png	0.9620752	13686	50771	31
150	150		KBY15_IMG_3078-16929.png	0.96986586	2784	62579	118
151	151		KBY15_IMG_3249-14706.png	0.9476082	1664	63688	144
152	152		DZK15_IMG_4617-10260.png	0.89902383	5756	58487	68
153	153		DZK15_IMG_2394-4959.png	0.93164104	2092	63137	191
154	154		KBY15_IMG_14877-3420.png	0.94268674	22139	40705	72
155	155		KBY15_IMG_23256-18468.png	0.85292685	29017	26512	1117
156	156		DZK15_IMG_3249-11115.png	0.88922757	39965	15614	885
157	157		DZK15_IMG_3762-4959.png	0.79993695	27919	23652	1138
158	158		DZK15_IMG_5472-2907.png	0.8501806	29063	26230	923
159	159		KBY15_IMG_7353-16929.png	0.8723866	36365	18532	1089
160	160		DZK15_IMG_3591-11799.png	0.9375806	8727	55647	96
161	161		KBY15_IMG_6669-16587.png	0.82964504	24706	30684	1709
162	162		KBY15_IMG_19836-16074.png	0.93562347	6700	57914	121
163	163		DZK15_IMG_7524-3762.png	0.90196085	46	65480	7
164	164		DZKN15_IMG_8721-5130.png	0.89567965	32300	25712	3225
165	165		KBY15_IMG_14877-2394.png	0.9019608	1104	64192	227

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative
166	166	KBY15_IMG_12996-7353.png	0.9229001	6021	58509	494	
167	167	KBY15_IMG_14706-23085.png	0.8760753	10795	51687	8	
168	168	KBY15_IMG_28044-13167.png	0.9057749	10901	52367	566	
169	169	DZK15_IMG_1881-7011.png	0.9727025	8748	56297	271	
170	170	DZK15_IMG_3933-12654.png	0.8775666	31735	24946	148	
171	171	KBY15_IMG_17955-24453.png	0.9654382	5056	60118	220	
172	172	DZKN15_IMG_6840-3933.png	0.9284555	35759	24266	804	
173	173	DZK15_IMG_5643-11970.png	0.9197898	17413	45086	583	
174	174	DZK15_IMG_7353-1710.png	0.9375527	12784	51049	285	
175	175	DZK15_IMG_4617-1710.png	0.8372848	2578	61956	609	
176	176	KBY15_IMG_28215-22059.png	0.9023558	16930	44942	723	
177	177	DZK15_IMG_6669-5814.png	0.8528337	33843	20013	614	
178	178	DZK15_IMG_5472-10944.png	0.8758714	27579	30140	2884	
179	179	DZK15_IMG_6156-4104.png	0.9897936	13092	52174	81	
180	180	KBY15_IMG_27018-15903.png	0.9634598	2729	62600	24	
181	181	KBY15_IMG_15048-2736.png	0.86158055	32423	22695	730	
182	182	KBY15_IMG_7695-10089.png	0.84316045	4626	59189	564	
183	183	KBY15_IMG_12825-21546.png	0.905472	34551	23771	1195	
184	184	KBY15_IMG_19665-15903.png	0.68458045	828	63945	34	
185	185	DZK15_IMG_3762-9918.png	0.8781294	28166	29552	1713	
186	186	DZKN15_IMG_1881-5814.png	0.61655515	16856	27714	188	
187	187	DZK15_IMG_5814-1368.png	0.8358567	9744	51965	965	
188	188	KBY15_IMG_10431-4617.png	0.8357588	402	64976	3	
189	189	KBY15_IMG_11286-4617.png	0.97093654	6314	58844	116	
190	190	DZK15_IMG_3249-7866.png	0.5046418	2120	59254	990	
191	191	DZK15_IMG_4788-9918.png	0.95008683	4102	61003	197	
192	192	DZK15_IMG_1710-4788.png	0.88774276	37437	18631	692	
193	193	DZKN15_IMG_5130-3249.png	0.91280144	246	65243	31	

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		id	png	Dice_score	True_Positive	True_Negative	False_Neg
194	194	194	KBY15_IMG_16416-4446.png	0.96210414	11577	53047	153
195	195	195	DZK15_IMG_4959-1710.png	0.80272865	5766	56936	10
196	196	196	DZK15_IMG_4788-5643.png	0.3508387	1119	60276	532
197	197	197	DZK15_IMG_1710-2907.png	0.23021582	16	65413	33
198	198	198	DZK15_IMG_5814-6840.png	0.94054496	3417	61687	206
199	199	199	DZK15_IMG_2907-10431.png	0.9681362	4436	60808	248
200	200	200	KBY15_IMG_10602-3078.png	0.89303	25734	33637	322
201	201	201	DZK15_IMG_2907-7182.png	0.8292816	25789	29129	5062
202	202	202	DZK15_IMG_1881-5301.png	0.6320416	3164	58688	51
203	203	203	DZKN15_IMG_4788-3249.png	0.8679362	2826	61850	422
204	204	204	DZK15_IMG_3078-10089.png	0.9602543	20391	43457	308
205	205	205	DZKN15_IMG_7866-5301.png	0.88903266	7555	56095	1562
206	206	206	DZK15_IMG_3591-7353.png	0.82058394	6211	56609	58
207	207	207	KBY15_IMG_27873-13167.png	0.93997526	4189	60812	493
208	208	208	DZK15_IMG_7524-4104.png	0.90248376	18440	43111	407
209	209	209	KBY15_IMG_28557-22914.png	0.6536376	3495	58337	26
210	210	210	DZK15_IMG_5643-9747.png	0.9135358	28437	31716	1042
211	211	211	DZK15_IMG_3762-14022.png	0.9665775	5596	59553	174
212	212	212	DZK15_IMG_5814-3933.png	0.7830931	13284	44893	1620
213	213	213	DZK15_IMG_6327-1881.png	0.9672262	1210	64244	44
214	214	214	DZK15_IMG_2907-3933.png	0.9189987	8095	56014	61
215	215	215	KBY15_IMG_12825-21204.png	0.7848077	25013	26806	4182
216	216	216	DZKN15_IMG_855-6840.png	0.7707826	2216	62002	831
217	217	217	DZK15_IMG_4446-3078.png	0.8464909	25600	30651	2551
218	218	218	KBY15_IMG_7182-16587.png	0.9144234	42512	15067	182
219	219	219	DZK15_IMG_4275-9234.png	0.79284745	29153	21149	1436
220	220	220	DZK15_IMG_6327-2907.png	0.85428107	14542	46033	287
221	221	221	KBY15_IMG_30267-12825.png	0.9044863	7893	55976	218

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				Dice_score	True_Positive	True_Negative	False_Negative
222	222	DZK15_IMG_2565-3762.png		0.92673576	46897	11224	2128
223	223	DZK15_IMG_7011-5985.png		0.9319618	16670	46432	266
224	224	KBY15_IMG_10944-4959.png		0.9125315	2170	62950	12
225	225	DZK15_IMG_4446-4617.png		0.9661118	3250	62058	169
226	226	KBY15_IMG_29241-23769.png		0.89817375	13328	49186	382
227	227	DZK15_IMG_3933-2052.png		0.79016685	900	64158	62
228	228	KBY15_IMG_15219-2052.png		nan	0	64249	11
229	229	KBY15_IMG_6840-16416.png		0.95440644	3276	61947	96
230	230	DZK15_IMG_5814-2394.png		0.80084753	189	65253	3
231	231	DZK15_IMG_2052-7011.png		0.8731809	210	65265	47
232	232	DZKN15_IMG_2736-6498.png		0.08183453	91	63403	707
233	233	DZK15_IMG_4959-11628.png		0.9594535	18540	45429	1123
234	234	KBY15_IMG_27873-12996.png		0.8842651	27773	30493	2835
235	235	DZK15_IMG_5985-6669.png		0.8489476	35250	17742	661
236	236	KBY15_IMG_28728-11970.png		0.27092427	1086	58605	1724
237	237	DZK15_IMG_2052-3420.png		0.90107864	37552	19739	1379
238	238	KBY15_IMG_29241-22914.png		0.83015037	3673	60360	1350
239	239	DZK15_IMG_2052-13338.png		0.9564301	2722	62566	19
240	240	DZK15_IMG_1539-7524.png		0.8467276	8571	53862	133
241	241	DZK15_IMG_3591-13509.png		0.96379524	772	64706	36
242	242	DZK15_IMG_3762-10260.png		0.9108848	1431	63825	139
243	243	DZK15_IMG_5643-11115.png		0.8994259	6345	57772	1301
244	244	DZK15_IMG_4104-2052.png		0.94880176	27279	35313	543
245	245	DZK15_IMG_1881-12996.png		0.9376537	23642	38750	81
246	246	KBY15_IMG_27702-11457.png		0.8213996	8621	53166	612
247	247	DZK15_IMG_3078-9576.png		0.89095473	35509	21335	1248
248	248	DZK15_IMG_3591-8379.png		0.8557013	24423	32876	1126
249	249	DZK15_IMG_2565-4788.png		0.9010957	24549	35598	265

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		id	png	Dice_score	True_Positive	True_Negative	False_Neg
250	250	DZK15_IMG_6840-7353.png	0.8547613	24765	32355	2123	
251	251	KBY15_IMG_15732-2907.png	0.89851385	27238	32145	823	
252	252	DZKN15_IMG_7011-4104.png	0.79424644	1270	63608	490	
253	253	DZKN15_IMG_5814-513.png	0.8776042	2696	62088	171	
254	254	KBY15_IMG_2565-17613.png	0.74728614	16005	38706	3282	
255	255	DZK15_IMG_7011-8721.png	0.6841448	274	65009	2	
256	256	DZKN15_IMG_7695-3420.png	0.78054035	3987	59307	914	
257	257	DZK15_IMG_2565-10089.png	0.9314254	6574	57994	683	
258	258	DZK15_IMG_6327-7866.png	0.8696139	37246	17121	1110	
259	259	DZKN15_IMG_4788-4959.png	0.9831663	10104	55086	60	
260	260	DZK15_IMG_5301-1881.png	0.9680178	8263	56727	326	
261	261	KBY15_IMG_23769-19323.png	0.79399675	4153	59228	193	
262	262	DZKN15_IMG_5301-684.png	0.82817453	23880	31747	3285	
263	263	DZK15_IMG_3249-12825.png	0.9317835	14629	48765	162	
264	264	DZK15_IMG_4788-5814.png	0.9260646	3338	61665	155	
265	265	DZK15_IMG_4446-2736.png	0.6302465	473	64508	122	
266	266	DZK15_IMG_7524-4275.png	0.87049603	15450	45489	179	
267	267	KBY15_IMG_14877-2565.png	0.9089342	35318	23141	1241	
268	268	DZK15_IMG_2223-11628.png	0.95040244	11986	52299	460	
269	269	KBY15_IMG_15561-2565.png	0.94736844	477	65006	14	
270	270	DZK15_IMG_4275-11286.png	0.826997	6341	56542	1019	
271	271	DZK15_IMG_2223-14022.png	0.9617225	2010	63366	75	
272	272	KBY15_IMG_19836-22743.png	0.88407564	17735	43150	1421	
273	273	DZKN15_IMG_1710-5985.png	0.9095504	35447	23039	1135	
274	274	KBY15_IMG_2907-14706.png	0.78711337	4300	58910	25	
275	275	DZKN15_IMG_1710-4788.png	0.8862353	31468	25989	2472	
276	276	DZK15_IMG_4959-12483.png	0.9757273	8703	56400	61	
277	277	DZK15_IMG_4617-9576.png	0.97832656	11014	54034	3	

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative
278	278	KBY15_IMG_9405-5301.png	0.94033664	7179	57446	101	
279	279	DZKN15_IMG_5814-855.png	0.91308343	4470	60215	90	
280	280	DZK15_IMG_5643-2052.png	0.6858137	788	64026	12	
281	281	DZK15_IMG_5130-11970.png	0.84013605	247	65195	7	
282	282	DZK15_IMG_4446-5130.png	0.95306677	7280	57539	154	
283	283	DZKN15_IMG_5985-2907.png	0.8722876	20702	38772	3856	
284	284	KBY15_IMG_29070-11970.png	0.90681577	1703	63483	23	
285	285	DZKN15_IMG_5985-1368.png	0.888751	16469	44944	42	
286	286	DZK15_IMG_1881-10944.png	0.86668384	3374	61124	972	
287	287	KBY15_IMG_29412-22914.png	0.8967424	29523	29214	1382	
288	288	DZK15_IMG_6498-5643.png	nan	0	63639	11	
289	289	DZKN15_IMG_7011-4275.png	0.83945817	37988	13018	608	
290	290	DZK15_IMG_1881-13338.png	0.71956927	9222	49126	411	
291	291	KBY15_IMG_7524-8550.png	0.75294566	23836	26058	3254	
292	292	DZK15_IMG_2565-14193.png	0.95362955	10365	54163	637	
293	293	KBY15_IMG_13851-22401.png	0.9219616	5405	59216	435	
294	294	DZK15_IMG_2736-9576.png	0.86663127	37552	16426	529	
295	295	DZK15_IMG_1539-10944.png	0.9782383	472	65043	6	
296	296	KBY15_IMG_17955-24624.png	0.94436634	5033	59910	498	
297	297	DZKN15_IMG_6669-3420.png	0.8583496	4166	59995	791	
298	298	KBY15_IMG_14364-22743.png	0.87601423	9231	53692	446	
299	299	DZK15_IMG_4617-8721.png	0.91557014	17638	44645	650	
300	300	KBY15_IMG_30951-21717.png	0.7218131	1911	62152	62	
301	301	DZK15_IMG_2736-5130.png	0.87398803	29581	27425	885	
302	302	KBY15_IMG_31806-22230.png	0.80005455	17600	39139	3916	
303	303	DZK15_IMG_7353-5301.png	0.9254145	28717	32190	1279	
304	304	DZK15_IMG_7182-5130.png	0.90230966	34632	23405	1268	
305	305	DZK15_IMG_2223-4275.png	0.94050074	7287	57327	116	

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		id	png	Dice_score	True_Positive	True_Negative	False_Neg
306	306		DZK15_IMG_6840-3249.png	0.9283277	34816	25344	1461
307	307		DZK15_IMG_9234-4446.png	0.7532385	1192	63563	19
308	308		DZK15_IMG_2223-6669.png	0.86014324	28872	27275	2415
309	309		KBY15_IMG_3933-13167.png	0.9680011	3252	62069	136
310	310		KBY15_IMG_6669-9918.png	0.9045528	6487	57680	484
311	311		DZKN15_IMG_8721-4788.png	0.9638363	5477	59648	18
312	312		DZK15_IMG_8208-3078.png	0.92480695	36762	22796	1251
313	313		DZK15_IMG_5472-9234.png	0.8319829	7393	55157	85
314	314		KBY15_IMG_11970-4446.png	0.92191637	6966	57390	23
315	315		KBY15_IMG_16074-21717.png	0.90650755	6380	57840	117
316	316		DZK15_IMG_5643-1710.png	0.9607062	2775	62534	182
317	317		DZK15_IMG_5643-2736.png	0.9250197	586	64855	50
318	318		KBY15_IMG_15390-22743.png	0.9051438	5983	58299	1147
319	319		DZK15_IMG_4104-13680.png	0.93807685	19565	43388	717
320	320		DZKN15_IMG_4617-4617.png	0.9129592	15083	47577	223
321	321		KBY15_IMG_3762-13509.png	nan	0	64653	110
322	322		DZK15_IMG_7695-5301.png	0.88167024	29476	28148	2094
323	323		KBY15_IMG_14877-22572.png	nan	0	64254	1282
324	324		DZKN15_IMG_6156-1539.png	0.80641264	29074	22503	1265
325	325		KBY15_IMG_3078-17613.png	0.7889785	587	64635	132
326	326		KBY15_IMG_12654-21204.png	0.9063037	3429	61398	124
327	327		DZK15_IMG_6669-3420.png	0.6760206	8528	48834	907
328	328		DZK15_IMG_3249-10602.png	0.83706677	2186	62499	846
329	329		DZK15_IMG_5130-6840.png	nan	0	61849	3687
330	330		DZKN15_IMG_6840-5472.png	0.9455004	19526	43759	126
331	331		KBY15_IMG_10773-10773.png	nan	0	65510	23
332	332		DZK15_IMG_4788-3933.png	0.9732409	1964	63464	37
333	333		DZKN15_IMG_8892-5130.png	0.9266752	10559	53306	470

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				Dice_score	True_Positive	True_Negative	False_Negative
334	334	KBY15_IMG_15390-2736.png		0.8639704	14462	46520	854
335	335	DZK15_IMG_4104-10602.png		0.90818626	3833	60928	202
336	336	DZK15_IMG_3420-6327.png		0.8439215	26608	29086	2545
337	337	KBY15_IMG_7353-16074.png		0.78431374	80	65412	44
338	338	KBY15_IMG_9918-13338.png		0.6806	1384	62853	104
339	339	DZK15_IMG_2736-7524.png		0.88423514	6038	57917	92
340	340	KBY15_IMG_13509-22572.png		0.96009135	10513	54149	226
341	341	KBY15_IMG_29241-12825.png		0.9847744	10672	54534	240
342	342	DZK15_IMG_7011-5643.png		0.72571063	5068	56637	3444
343	343	DZK15_IMG_6669-4104.png		0.88675326	37139	18911	1389
344	344	DZK15_IMG_5643-5814.png		0.9686692	1685	63742	84
345	345	KBY15_IMG_9918-3762.png		0.87578344	13974	47598	1390
346	346	DZK15_IMG_6840-3762.png		0.89048076	32320	25266	1107
347	347	DZK15_IMG_1710-6498.png		0.821929	28216	25094	641
348	348	DZK15_IMG_8379-2907.png		0.9511041	603	64871	25
349	349	DZK15_IMG_7866-2223.png		0.8923565	1687	63442	43
350	350	KBY15_IMG_7353-17100.png		0.9556583	2791	62486	23
351	351	DZKN15_IMG_0-6669.png		0.9435003	7356	57299	91
352	352	KBY15_IMG_15048-3591.png		0.92093396	7868	56317	279
353	353	DZK15_IMG_4788-10773.png		0.89145726	887	64433	4
354	354	KBY15_IMG_28044-12312.png		nan	0	65534	2
355	355	DZK15_IMG_3933-6840.png		0.88287854	36413	19462	1939
356	356	DZK15_IMG_3249-13680.png		0.7808394	7042	54541	190
357	357	DZK15_IMG_5472-9405.png		0.95967746	595	64891	15
358	358	KBY15_IMG_12825-21888.png		0.8903309	12417	50060	2362
359	359	DZK15_IMG_4959-6156.png		0.7999366	20178	35265	1673
360	360	DZK15_IMG_4788-7182.png		0.9227337	20893	41144	353
361	361	DZK15_IMG_2052-12654.png		0.92585737	5251	59444	78

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		id	png	Dice_score	True_Positive	True_Negative	False_Neg
362	362	362	DZKN15_IMG_1197-5814.png	0.8829384	36634	19188	3932
363	363	363	DZK15_IMG_1710-13338.png	0.98169744	6061	59249	182
364	364	364	DZKN15_IMG_855-7011.png	0.82187617	2164	62434	311
365	365	365	KBY15_IMG_30438-23940.png	0.86058563	31281	24120	1036
366	366	366	DZKN15_IMG_5814-1881.png	0.88869774	36677	19672	1150
367	367	367	DZK15_IMG_2736-9918.png	0.8735419	24899	33428	1243
368	368	368	DZK15_IMG_1368-9918.png	0.9362459	7629	56868	641
369	369	369	DZK15_IMG_4959-11457.png	0.96354413	10255	54505	156
370	370	370	DZK15_IMG_3762-6669.png	0.5592295	3687	56037	539
371	371	371	DZK15_IMG_4959-8892.png	0.8692537	38943	14878	5670
372	372	372	DZK15_IMG_8208-6327.png	0.52912384	1081	62531	171
373	373	373	DZKN15_IMG_4788-4104.png	0.92903745	30825	30002	2150
374	374	374	DZKN15_IMG_7182-4104.png	0.84210527	24	65503	9
375	375	375	DZKN15_IMG_5814-1710.png	0.8888322	36623	19752	2849
376	376	376	KBY15_IMG_29070-12483.png	0.87454987	33999	21783	927
377	377	377	KBY15_IMG_17955-25650.png	0.93857366	1803	63497	2
378	378	378	DZK15_IMG_6327-6327.png	0.9321215	7333	57135	406
379	379	379	DZK15_IMG_6327-5472.png	0.8839961	33385	23389	2925
380	380	380	KBY15_IMG_20349-15561.png	0.9299428	9106	55058	1027
381	381	381	DZK15_IMG_8379-1026.png	0.9056466	4972	59528	36
382	382	382	DZKN15_IMG_2223-6156.png	0.9737291	16568	48074	340
383	383	383	DZK15_IMG_4959-8379.png	0.9094037	34621	24017	2162
384	384	384	DZK15_IMG_2052-4275.png	0.7536937	2168	61951	287
385	385	385	DZK15_IMG_1710-12312.png	0.81647086	35076	14691	10515
386	386	386	DZK15_IMG_6498-7524.png	nan	0	64633	2
387	387	387	DZK15_IMG_5643-11799.png	0.77855587	6448	55420	974
388	388	388	DZK15_IMG_3249-3591.png	0.9188432	2955	62059	90
389	389	389	DZK15_IMG_3591-11286.png	0.91151613	29555	30243	802

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative
390	390	KBY15_IMG_12825-10602.png	0.97071624	2453	62935	123	
391	391	DZKN15_IMG_5985-4617.png	0.89856625	3353	61426	99	
392	392	DZK15_IMG_3933-13851.png	nan	0	65516	20	
393	393	DZK15_IMG_3420-13167.png	0.8602719	13668	47428	748	
394	394	KBY15_IMG_14364-3420.png	0.9541936	22310	41084	40	
395	395	DZKN15_IMG_5814-2907.png	0.7526486	4085	58766	411	
396	396	KBY15_IMG_29070-12996.png	0.7626263	2567	61371	256	
397	397	DZK15_IMG_3762-4617.png	0.6203007	165	65169	1	
398	398	KBY15_IMG_7524-9063.png	0.8029309	25094	28124	7348	
399	399	DZK15_IMG_2565-13680.png	0.9121429	33555	25517	436	
400	400	KBY15_IMG_32490-23256.png	0.8762887	6630	57034	701	
401	401	DZKN15_IMG_7695-4788.png	nan	0	65536	0	
402	402	DZK15_IMG_3591-6498.png	0.9456929	2020	63284	18	
403	403	DZK15_IMG_4617-4446.png	0.4446944	1779	59314	182	
404	404	DZK15_IMG_5814-8892.png	0.866087	19076	40561	1317	
405	405	DZKN15_IMG_7524-3591.png	0.97492146	11643	53294	398	
406	406	KBY15_IMG_28386-22059.png	0.89086235	32402	25195	927	
407	407	KBY15_IMG_22914-9405.png	0.89766306	8969	54522	876	
408	408	DZKN15_IMG_8892-4788.png	0.7150905	3554	59150	76	
409	409	KBY15_IMG_27360-27189.png	0.9426566	18469	44820	35	
410	410	KBY15_IMG_31977-22230.png	0.95472705	3585	61611	186	
411	411	DZK15_IMG_5130-5130.png	0.76820153	21989	30277	1936	
412	412	DZK15_IMG_7182-4788.png	0.8351233	24999	30666	1538	
413	413	KBY15_IMG_24624-17955.png	0.9279539	161	65350	11	
414	414	KBY15_IMG_13338-21888.png	0.96776134	1606	63823	71	
415	415	KBY15_IMG_12996-21375.png	0.91323775	42603	14838	629	
416	416	DZKN15_IMG_4617-5472.png	0.93347716	6925	57624	14	
417	417	DZK15_IMG_7011-7695.png	0.70296025	1033	63630	3	

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		id	png	Dice_score	True_Positive	True_Negative	False_Neg
418	418	DZK15_IMG_4959-8550.png	0.8208658	19143	38038	827	
419	419	DZKN15_IMG_6498-3762.png	0.95797795	21680	41954	334	
420	420	DZK15_IMG_1710-7866.png	0.9640365	1796	63606	104	
421	421	KBY15_IMG_28728-11457.png	0.9521669	3812	61341	175	
422	422	KBY15_IMG_12483-21033.png	0.8495812	8571	53930	376	
423	423	DZKN15_IMG_6840-5814.png	0.33995774	402	63573	0	
424	424	DZK15_IMG_1881-7353.png	0.9447579	34743	26730	1544	
425	425	KBY15_IMG_11115-10773.png	0.9903553	4056	61401	34	
426	426	DZK15_IMG_4446-12825.png	0.95813525	7255	57647	42	
427	427	KBY15_IMG_11115-4446.png	0.42617333	1244	60942	188	
428	428	DZK15_IMG_7524-1026.png	0.9128976	14280	48531	76	
429	429	DZK15_IMG_6327-4788.png	0.9492557	1403	63983	3	
430	430	KBY15_IMG_7866-16758.png	0.8628986	38915	14255	1021	
431	431	DZK15_IMG_3420-2223.png	0.85653603	21374	37002	1680	
432	432	DZK15_IMG_2052-8721.png	0.9598049	6101	58924	0	
433	433	DZKN15_IMG_6327-3591.png	0.88656783	37094	18950	3726	
434	434	DZK15_IMG_5301-7524.png	0.8841763	29894	27810	1342	

[All dataset] 5-layer U-Net

	id	png	Dice_score	True_Positive	True_Negative	False_Negative
0	0	DZK15_IMG_7695-3762.png	0.870198	21225	37979	4395
1	1	DZKN15_IMG_6840-2907.png	0.96759737	3240	62079	179
2	2	DZK15_IMG_6840-3078.png	0.7613231	16019	39473	5497
3	3	DZK15_IMG_7524-3249.png	0.9247367	1800	63443	5
4	4	KBY15_IMG_29925-23256.png	0.7833462	29097	20344	1492
5	5	KBY15_IMG_3078-14535.png	0.95028526	583	64892	27
6	6	DZK15_IMG_8037-4104.png	0.9558102	5840	59156	0
7	7	DZK15_IMG_3249-8208.png	nan	0	61849	3687
8	8	DZKN15_IMG_5985-3762.png	0.94512194	620	64844	8
9	9	KBY15_IMG_11286-9747.png	0.8289779	20746	36230	5251
10	10	DZKN15_IMG_4617-5643.png	0.90033793	31971	26487	1258
11	11	DZK15_IMG_1197-9918.png	0.92622805	37760	21761	1171
12	12	DZK15_IMG_4446-7182.png	0.91613066	14244	48684	196
13	13	DZK15_IMG_3591-9918.png	0.9456143	7320	57374	127
14	14	DZK15_IMG_2736-10260.png	0.20304567	20	65359	29
15	15	KBY15_IMG_3933-13509.png	0.83754206	995	64155	216
16	16	DZK15_IMG_7524-5985.png	0.8441175	31616	22243	2493
17	17	DZK15_IMG_5985-10773.png	0.97740185	8261	56893	113
18	18	DZK15_IMG_3933-8721.png	0.9452275	4996	59961	45
19	19	DZKN15_IMG_5643-684.png	0.8949204	32197	25778	3328
20	20	KBY15_IMG_19836-15732.png	0.94096524	4192	60818	490
21	21	DZK15_IMG_7866-3078.png	0.9615154	2411	62932	3
22	22	DZK15_IMG_7524-7182.png	0.93664646	13683	50002	814
23	23	DZK15_IMG_2394-13680.png	0.8960657	36430	20655	3042
24	24	DZKN15_IMG_7866-4788.png	0.9307496	4563	60294	267
25	25	DZK15_IMG_7353-1539.png	0.91242164	47018	9492	2123

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		id	png	Dice_score	True_Positive	True_Negative	False_Neg
26	26	KBY15_IMG_30780-24282.png	0.9710258	2480	62908	68	
27	27	DZK15_IMG_7182-7866.png	0.9412601	7283	57344	386	
28	28	KBY15_IMG_4104-13167.png	0.95798194	6418	58555	219	
29	29	KBY15_IMG_7182-9918.png	0.7998129	23085	30895	5176	
30	30	KBY15_IMG_7524-9405.png	0.86793035	30654	25553	1110	
31	31	DZK15_IMG_3420-12312.png	0.89466816	32561	25308	768	
32	32	DZK15_IMG_3933-10602.png	0.9662447	3206	62106	164	
33	33	DZK15_IMG_2223-2736.png	0.8405625	25667	30132	1423	
34	34	KBY15_IMG_9747-4104.png	0.9915473	4047	61420	43	
35	35	DZK15_IMG_3591-6156.png	0.8334593	24815	30804	2073	
36	36	DZK15_IMG_3078-4446.png	0.93871844	19454	43542	198	
37	37	DZK15_IMG_4788-9234.png	0.8504366	34131	19400	795	
38	38	KBY15_IMG_29583-12483.png	0.8926294	29538	28892	1749	
39	39	DZKN15_IMG_6669-3249.png	0.74746674	2840	60777	24	
40	40	DZK15_IMG_2736-11286.png	0.9805911	6088	59207	155	
41	41	DZK15_IMG_3762-7182.png	0.8927538	16503	45068	8	
42	42	DZKN15_IMG_5814-4788.png	0.93783826	6065	58667	450	
43	43	DZK15_IMG_5301-2394.png	0.86969674	37380	16955	701	
44	44	DZK15_IMG_2223-9576.png	0.9492127	8289	56360	322	
45	45	KBY15_IMG_12825-7695.png	0.8682225	33595	21743	3491	
46	46	DZK15_IMG_4788-8721.png	nan	0	65516	20	
47	47	DZK15_IMG_8550-4959.png	0.7619048	4248	58633	558	
48	48	DZK15_IMG_4104-7353.png	0.9030665	33469	24882	522	
49	49	DZK15_IMG_1368-6327.png	0.6800574	474	64616	17	
50	50	DZKN15_IMG_6156-4104.png	0.8859769	8046	55419	110	
51	51	DZK15_IMG_5814-3078.png	nan	0	65503	33	
52	52	KBY15_IMG_14877-22743.png	0.9306221	7780	56596	490	
53	53	DZK15_IMG_4959-2907.png	0.9083791	7193	56892	48	

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative
54	54		KBY15_IMG_14193-3249.png	0.89733744	17289	44291	707
55	55		KBY15_IMG_20178-22914.png	0.8812014	3286	61364	86
56	56		KBY15_IMG_8037-16416.png	0.9238644	47021	10765	2004
57	57		KBY15_IMG_19836-15903.png	0.86040545	8552	54209	152
58	58		DZK15_IMG_3249-13509.png	0.81464535	9434	51809	1522
59	59		KBY15_IMG_23256-18810.png	0.94706076	7290	57431	113
60	60		DZK15_IMG_4617-5301.png	0.8856551	19871	40534	656
61	61		DZK15_IMG_3420-3249.png	nan	0	64254	1282
62	62		DZK15_IMG_6840-4617.png	0.9282787	9060	55076	1073
63	63		DZK15_IMG_1197-8208.png	0.9606602	10476	54202	526
64	64		KBY15_IMG_20520-23085.png	0.90046406	6016	58190	481
65	65		DZK15_IMG_4446-2565.png	0.91839397	6336	58074	921
66	66		KBY15_IMG_12483-21717.png	0.7287636	14576	40110	4711
67	67		KBY15_IMG_10602-3762.png	0.86280715	3547	60861	799
68	68		DZKN15_IMG_8379-4959.png	0.5994632	4802	54317	5547
69	69		DZKN15_IMG_7182-4275.png	0.86027336	15546	44940	83
70	70		KBY15_IMG_32661-24282.png	0.6209678	77	65365	94
71	71		DZK15_IMG_3420-8892.png	0.93383914	10092	54014	549
72	72		DZK15_IMG_4788-11628.png	0.64584714	486	64517	109
73	73		KBY15_IMG_30096-12654.png	0.9400108	6973	57673	16
74	74		DZK15_IMG_2736-14022.png	0.8809857	9116	53957	729
75	75		KBY15_IMG_27702-27189.png	0.94549483	40132	20777	744
76	76		KBY15_IMG_28557-24111.png	0.8257153	24776	30301	2350
77	77		DZK15_IMG_3420-12483.png	0.86019456	4510	59560	7
78	78		DZK15_IMG_3420-5814.png	0.6254819	3164	58583	51
79	79		DZK15_IMG_2223-11457.png	0.7566847	17022	37567	1288
80	80		DZK15_IMG_3420-8721.png	0.80194545	3875	59747	1026
81	81		DZK15_IMG_7182-3762.png	0.90828663	5749	58626	123

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		id	png	Dice_score	True_Positive	True_Negative	False_Neg
82	82		DZK15_IMG_4275-4446.png	0.8563608	24560	32737	2605
83	83		KBY15_IMG_13509-22401.png	0.72210354	10134	47602	1221
84	84		DZK15_IMG_4788-11115.png	0.7382406	1028	63779	8
85	85		KBY15_IMG_7011-10431.png	0.74272037	3724	59232	622
86	86		DZKN15_IMG_1026-7011.png	0.81233126	10830	49702	1855
87	87		DZKN15_IMG_8550-4275.png	0.8681906	13236	48281	474
88	88		DZK15_IMG_7695-2907.png	0.9239857	17674	44954	614
89	89		DZK15_IMG_5130-11457.png	0.8669035	16964	43363	689
90	90		KBY15_IMG_14535-22914.png	0.66566	9258	46978	177
91	91		DZK15_IMG_2394-10431.png	0.63238823	6457	51572	3909
92	92		KBY15_IMG_7524-17271.png	0.9535105	2010	63330	28
93	93		KBY15_IMG_7695-15903.png	0.9504056	6736	58097	85
94	94		KBY15_IMG_15048-2223.png	0.9567312	16683	47344	688
95	95		DZK15_IMG_4275-4275.png	0.85112065	33818	19887	639
96	96		DZK15_IMG_6498-3420.png	0.6742616	799	63965	1
97	97		DZK15_IMG_4104-12996.png	0.87455827	990	64262	242
98	98		DZK15_IMG_3591-4275.png	0.9397984	23627	38882	96
99	99		DZK15_IMG_2907-12825.png	0.8590471	19914	39087	623
100	100		DZK15_IMG_2565-5643.png	0.8851895	27756	30580	2852
101	101		DZK15_IMG_7011-5472.png	0.8147879	34811	14899	10780
102	102		DZK15_IMG_5301-3420.png	0.75142086	11833	45874	880
103	103		KBY15_IMG_11970-3762.png	0.90171194	13642	48920	774
104	104		DZK15_IMG_2565-11115.png	0.6909673	8625	49196	2313
105	105		DZK15_IMG_6156-3078.png	0.76275474	7094	54029	138
106	106		KBY15_IMG_30438-24111.png	nan	0	64868	11
107	107		DZK15_IMG_1539-12483.png	0.8043478	962	64106	207
108	108		KBY15_IMG_19836-16416.png	0.97119343	472	65036	6
109	109		KBY15_IMG_13680-22401.png	0.94152564	6344	58404	426

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				Dice_score	True_Positive	True_Negative	False_Negative
110	110	DZK15_IMG_6156-1710.png		0.9272814	37018	22712	995
111	111	DZK15_IMG_4275-9918.png		0.8721842	33607	22079	1794
112	112	KBY15_IMG_23085-9234.png		0.9430285	5032	59896	499
113	113	DZK15_IMG_2907-10944.png		0.9605394	3846	61374	240
114	114	DZK15_IMG_2907-3762.png		0.88073397	192	65292	0
115	115	DZK15_IMG_2394-11799.png		0.85897845	15977	44313	833
116	116	DZK15_IMG_2736-9747.png		0.87275726	10556	51902	247
117	117	DZK15_IMG_7353-6327.png		0.886245	5773	58281	51
118	118	DZK15_IMG_5643-3933.png		0.8238375	26584	27583	758
119	119	DZK15_IMG_3591-9405.png		0.7477365	4790	57514	9
120	120	DZK15_IMG_1368-10602.png		0.89833766	6296	57815	10
121	121	DZK15_IMG_5472-4446.png		0.8893811	36337	20160	549
122	122	DZK15_IMG_2565-5130.png		0.8974264	30495	28070	2499
123	123	KBY15_IMG_22743-9576.png		0.958417	1671	63720	98
124	124	DZK15_IMG_4104-9405.png		0.6713875	4788	56061	325
125	125	KBY15_IMG_10773-3420.png		0.89802635	1092	64196	239
126	126	DZK15_IMG_8721-4446.png		0.9702811	1812	63613	88
127	127	KBY15_IMG_13680-20520.png		0.8931789	1388	63816	182
128	128	KBY15_IMG_20007-23598.png		0.77011496	1273	63503	487
129	129	KBY15_IMG_10773-2907.png		0.75376886	75	65412	49
130	130	DZK15_IMG_5301-1368.png		0.954856	3564	61635	207
131	131	KBY15_IMG_7011-16245.png		0.8136095	5225	57917	2106
132	132	DZK15_IMG_4788-4446.png		0.6210274	3107	58637	59
133	133	DZKN15_IMG_6840-4617.png		0.9745455	2814	62575	88
134	134	DZK15_IMG_5985-8550.png		0.9054915	3842	60892	193
135	135	KBY15_IMG_7011-9918.png		0.8935646	11594	51180	136
136	136	DZK15_IMG_4104-1710.png		0.4623347	402	64199	0
137	137	DZK15_IMG_7353-6156.png		0.84472847	2644	61920	543

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		id	png	Dice_score	True_Positive	True_Negative	False_Neg
138	138		DZK15_IMG_1881-6156.png	0.90236986	6359	57801	1287
139	139		DZK15_IMG_6840-9063.png	nan	0	65513	23
140	140		DZKN15_IMG_2565-6498.png	0.92351174	5065	59632	264
141	141		DZK15_IMG_7011-7353.png	0.90128565	5994	58229	136
142	142		DZK15_IMG_5472-3420.png	0.93431354	2923	62202	122
143	143		DZK15_IMG_5814-5814.png	0.91990846	7839	56332	272
144	144		DZKN15_IMG_6840-2736.png	0.8533193	23497	33961	4028
145	145		DZK15_IMG_6156-4446.png	0.9266085	19456	42998	826
146	146		DZKN15_IMG_2052-4275.png	0.89015067	29395	28886	1071
147	147		KBY15_IMG_3591-14877.png	0.8140107	29131	23093	435
148	148		DZK15_IMG_4275-2565.png	0.87935203	8739	54399	209
149	149		DZKN15_IMG_1881-5472.png	0.9267869	2133	63066	322
150	150		KBY15_IMG_3078-16929.png	0.8444535	25022	31296	1515
151	151		KBY15_IMG_3249-14706.png	0.8219236	28905	24106	1434
152	152		DZK15_IMG_4617-10260.png	0.89813495	6573	57472	174
153	153		DZK15_IMG_2394-4959.png	0.90564114	28400	31218	1079
154	154		KBY15_IMG_14877-3420.png	0.80064964	986	64059	37
155	155		KBY15_IMG_23256-18468.png	0.88298744	12319	49952	2460
156	156		DZK15_IMG_3249-11115.png	0.831586	26454	28367	5988
157	157		DZK15_IMG_3762-4959.png	0.9352367	33871	26974	2054
158	158		DZK15_IMG_5472-2907.png	0.91493386	242	65249	35
159	159		KBY15_IMG_7353-16929.png	0.88644415	17888	43065	2505
160	160		DZK15_IMG_3591-11799.png	0.9064036	14381	48185	448
161	161		KBY15_IMG_6669-16587.png	0.44171175	1796	59200	165
162	162		KBY15_IMG_19836-16074.png	0.8065809	4829	58391	0
163	163		DZK15_IMG_7524-3762.png	0.95726794	2733	62559	8
164	164		DZKN15_IMG_8721-5130.png	0.89061666	18328	42706	519
165	165		KBY15_IMG_14877-2394.png	0.81178075	12803	46796	2101

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative
166	166	KBY15_IMG_12996-7353.png	0.8343815	199	65258	58	
167	167	KBY15_IMG_14706-23085.png	nan	0	65536	0	
168	168	KBY15_IMG_28044-13167.png	0.9455518	5479	59426	16	
169	169	DZK15_IMG_1881-7011.png	0.9580343	3470	61762	153	
170	170	DZK15_IMG_3933-12654.png	nan	0	65534	2	
171	171	KBY15_IMG_17955-24453.png	0.52371025	1005	62703	247	
172	172	DZKN15_IMG_6840-3933.png	0.8712706	32342	23637	2213	
173	173	DZK15_IMG_5643-11970.png	0.9572864	6096	58896	5	
174	174	DZK15_IMG_7353-1710.png	0.8680806	33481	21879	4155	
175	175	DZK15_IMG_4617-1710.png	0.9770265	10462	54582	450	
176	176	KBY15_IMG_28215-22059.png	0.7591323	4042	58929	454	
177	177	DZK15_IMG_6669-5814.png	0.8709123	31679	24466	204	
178	178	DZK15_IMG_5472-10944.png	nan	0	65532	4	
179	179	DZK15_IMG_6156-4104.png	0.9645	1929	63465	72	
180	180	KBY15_IMG_27018-15903.png	0.94461715	18540	44822	1123	
181	181	KBY15_IMG_15048-2736.png	0.91086614	8303	55608	26	
182	182	KBY15_IMG_7695-10089.png	nan	0	65439	11	
183	183	KBY15_IMG_12825-21546.png	0.9103365	6046	58299	1084	
184	184	KBY15_IMG_19665-15903.png	0.9481571	22148	40966	63	
185	185	DZK15_IMG_3762-9918.png	0.7016289	883	63902	103	
186	186	DZKN15_IMG_1881-5814.png	0.5440529	247	64875	7	
187	187	DZK15_IMG_5814-1368.png	0.7668822	6405	55237	955	
188	188	KBY15_IMG_10431-4617.png	0.93658537	960	64446	105	
189	189	KBY15_IMG_11286-4617.png	0.9446115	14607	49216	184	
190	190	DZK15_IMG_3249-7866.png	0.85291964	11627	49899	397	
191	191	DZK15_IMG_4788-9918.png	0.867113	7318	55975	160	
192	192	DZK15_IMG_1710-4788.png	0.87583107	28126	29435	1753	
193	193	DZKN15_IMG_5130-3249.png	0.9458183	1702	63639	173	

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		id	png	Dice_score	True_Positive	True_Negative	False_Neg
194	194	194	KBY15_IMG_16416-4446.png	0.9633564	6349	58704	81
195	195	195	DZK15_IMG_4959-1710.png	nan	0	65530	6
196	196	196	DZK15_IMG_4788-5643.png	0.64945126	1509	62398	67
197	197	197	DZK15_IMG_1710-2907.png	0.93509454	15221	48202	8
198	198	198	DZK15_IMG_5814-6840.png	0.6545455	108	65314	0
199	199	199	DZK15_IMG_2907-10431.png	0.86062765	21557	36997	1497
200	200	200	KBY15_IMG_10602-3078.png	0.83840543	6667	56299	556
201	201	201	DZK15_IMG_2907-7182.png	0.9459216	2099	63197	184
202	202	202	DZK15_IMG_1881-5301.png	0.96234643	1214	64227	40
203	203	203	DZKN15_IMG_4788-3249.png	0.78094745	24036	28016	1160
204	204	204	DZK15_IMG_3078-10089.png	0.9457043	27128	35293	694
205	205	205	DZKN15_IMG_7866-5301.png	0.9272958	35489	24482	813
206	206	206	DZK15_IMG_3591-7353.png	0.8142506	28649	23816	408
207	207	207	KBY15_IMG_27873-13167.png	0.9492332	10181	54266	558
208	208	208	DZK15_IMG_7524-4104.png	0.83952945	2676	61837	191
209	209	209	KBY15_IMG_28557-22914.png	0.8876084	15096	46617	10
210	210	210	DZK15_IMG_5643-9747.png	0.8741332	38888	15449	1048
211	211	211	DZK15_IMG_3762-14022.png	0.9424667	8723	55748	100
212	212	212	DZK15_IMG_5814-3933.png	0.9323261	8762	55502	185
213	213	213	DZK15_IMG_6327-1881.png	nan	0	65516	20
214	214	214	DZK15_IMG_2907-3933.png	0.8575979	4577	59439	96
215	215	215	KBY15_IMG_12825-21204.png	0.9632856	774	64703	34
216	216	216	DZKN15_IMG_855-6840.png	0.7502955	2539	61307	284
217	217	217	DZK15_IMG_4446-3078.png	0.9901453	13112	52163	61
218	218	218	KBY15_IMG_7182-16587.png	0.96879697	22215	41890	135
219	219	219	DZK15_IMG_4275-9234.png	0.8587006	33941	20425	3786
220	220	220	DZK15_IMG_6327-2907.png	0.627086	977	63397	674
221	221	221	KBY15_IMG_30267-12825.png	0.9654043	5009	60168	1

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				Dice_score	True_Positive	True_Negative	False_Negative
222	222	DZK15_IMG_2565-3762.png		0.8496927	24195	32781	607
223	223	DZK15_IMG_7011-5985.png		0.91936994	7879	56275	268
224	224	KBY15_IMG_10944-4959.png		0.95719004	8843	55902	176
225	225	DZK15_IMG_4446-4617.png		0.6499033	840	63791	22
226	226	KBY15_IMG_29241-23769.png		0.8870249	6874	56911	548
227	227	DZK15_IMG_3933-2052.png		0.917785	34606	24730	2099
228	228	KBY15_IMG_15219-2052.png		0.9311928	10644	53319	385
229	229	KBY15_IMG_6840-16416.png		0.91317075	26981	33424	1080
230	230	DZK15_IMG_5814-2394.png		0.955102	1404	64000	2
231	231	DZK15_IMG_2052-7011.png		0.4220221	1031	61681	2522
232	232	DZKN15_IMG_2736-6498.png		0.8403331	4692	59061	498
233	233	DZK15_IMG_4959-11628.png		0.9111489	24109	36725	592
234	234	KBY15_IMG_27873-12996.png		0.8590618	4093	60100	864
235	235	DZK15_IMG_5985-6669.png		0.9302786	7045	57435	688
236	236	KBY15_IMG_28728-11970.png		0.74632	1952	62257	409
237	237	DZK15_IMG_2052-3420.png		0.798948	8810	52292	521
238	238	KBY15_IMG_29241-22914.png		0.96714085	4827	60381	2
239	239	DZK15_IMG_2052-13338.png		0.9721369	4274	61017	99
240	240	DZK15_IMG_1539-7524.png		0.9244766	28858	31963	1138
241	241	DZK15_IMG_3591-13509.png		0.8910729	25114	34282	1028
242	242	DZK15_IMG_3762-10260.png		0.9377432	2169	63079	13
243	243	DZK15_IMG_5643-11115.png		0.8071278	27222	25304	649
244	244	DZK15_IMG_4104-2052.png		0.85729533	34537	19501	1374
245	245	DZK15_IMG_1881-12996.png		0.87916636	29318	28159	1587
246	246	KBY15_IMG_27702-11457.png		0.48541042	890	62759	1
247	247	DZK15_IMG_3078-9576.png		0.9417941	7265	57373	169
248	248	DZK15_IMG_3591-8379.png		0.84250087	14459	45671	243
249	249	DZK15_IMG_2565-4788.png		0.89870346	7590	56235	1527

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		id	png	Dice_score	True_Positive	True_Negative	False_Neg
250	250	DZK15_IMG_6840-7353.png	0.93443763	4682	60197	87	
251	251	KBY15_IMG_15732-2907.png	0.9022755	27657	31888	2806	
252	252	DZKN15_IMG_7011-4104.png	0.9608078	5614	59464	156	
253	253	DZKN15_IMG_5814-513.png	0.75730497	9408	50098	225	
254	254	KBY15_IMG_2565-17613.png	0.9024095	3352	61459	100	
255	255	DZK15_IMG_7011-8721.png	0.93392825	6594	58009	770	
256	256	DZKN15_IMG_7695-3420.png	0.8284032	17097	41356	927	
257	257	DZK15_IMG_2565-10089.png	0.8642659	156	65331	16	
258	258	DZK15_IMG_6327-7866.png	0.4941525	1838	59935	1272	
259	259	DZKN15_IMG_4788-4959.png	0.687027	2542	60678	523	
260	260	DZK15_IMG_5301-1881.png	0.9262101	16600	46291	336	
261	261	KBY15_IMG_23769-19323.png	0.92434627	20838	41287	408	
262	262	DZKN15_IMG_5301-684.png	0.57280153	596	64051	123	
263	263	DZK15_IMG_3249-12825.png	0.8732466	39686	14329	4927	
264	264	DZK15_IMG_4788-5814.png	0.80679834	21694	33452	2231	
265	265	DZK15_IMG_4446-2736.png	0.85484266	19219	39790	751	
266	266	DZK15_IMG_7524-4275.png	0.9031122	6921	57130	18	
267	267	KBY15_IMG_14877-2565.png	0.8797372	21020	38769	3538	
268	268	DZK15_IMG_2223-11628.png	0.89694387	5048	59328	169	
269	269	KBY15_IMG_15561-2565.png	0.875422	30466	26399	770	
270	270	DZK15_IMG_4275-11286.png	0.84286493	24701	31625	3450	
271	271	DZK15_IMG_2223-14022.png	0.8638216	25221	32363	1194	
272	272	KBY15_IMG_19836-22743.png	0.8827543	1423	63735	78	
273	273	DZKN15_IMG_1710-5985.png	0.9179834	610	64817	26	
274	274	KBY15_IMG_2907-14706.png	0.8924083	36429	20323	1398	
275	275	DZKN15_IMG_1710-4788.png	0.82505864	21105	35481	1150	
276	276	DZK15_IMG_4959-12483.png	0.9501499	11884	52405	562	
277	277	DZK15_IMG_4617-9576.png	0.9435291	7101	57585	179	

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative
278	278	KBY15_IMG_9405-5301.png	0.8983322	24480	35515	334	
279	279	DZKN15_IMG_5814-855.png	0.97112453	19893	44460	806	
280	280	DZK15_IMG_5643-2052.png	0.86658585	31451	24401	968	
281	281	DZK15_IMG_5130-11970.png	0.95105374	2798	62450	16	
282	282	DZK15_IMG_4446-5130.png	0.9544402	2472	62828	104	
283	283	DZKN15_IMG_5985-2907.png	0.6347748	3178	58701	1048	
284	284	KBY15_IMG_29070-11970.png	0.8652034	36127	18152	2225	
285	285	DZKN15_IMG_5985-1368.png	0.8668208	16685	43724	2466	
286	286	DZK15_IMG_1881-10944.png	0.81096673	9702	51311	83	
287	287	KBY15_IMG_29412-22914.png	0.97994745	16591	48266	317	
288	288	DZK15_IMG_6498-5643.png	0.88683176	19783	40704	763	
289	289	DZKN15_IMG_7011-4275.png	0.9730933	15967	48686	467	
290	290	DZK15_IMG_1881-13338.png	0.7345216	2349	61489	698	
291	291	KBY15_IMG_7524-8550.png	nan	0	65534	2	
292	292	DZK15_IMG_2565-14193.png	0.9694258	3250	62081	138	
293	293	KBY15_IMG_13851-22401.png	0.81884694	1399	63518	4	
294	294	DZK15_IMG_2736-9576.png	0.8749638	30272	26612	2162	
295	295	DZK15_IMG_1539-10944.png	0.9334711	31619	29410	1356	
296	296	KBY15_IMG_17955-24624.png	0.893193	37377	19220	979	
297	297	DZKN15_IMG_6669-3420.png	0.8942929	18130	43120	771	
298	298	KBY15_IMG_14364-22743.png	0.97793907	10240	54834	171	
299	299	DZK15_IMG_4617-8721.png	0.9671863	4436	60799	248	
300	300	KBY15_IMG_30951-21717.png	0.8814172	32939	23734	3371	
301	301	DZK15_IMG_2736-5130.png	0.91309816	36292	22336	934	
302	302	KBY15_IMG_31806-22230.png	0.38015902	1004	61258	1806	
303	303	DZK15_IMG_7353-5301.png	0.8813271	35729	20185	2799	
304	304	DZK15_IMG_7182-5130.png	0.9372961	5172	59672	100	
305	305	DZK15_IMG_2223-4275.png	0.9834836	11016	54150	1	

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		id	png	Dice_score	True_Positive	True_Negative	False_Neg
306	306	DZK15_IMG_6840-3249.png	0.9526971	21671	41713	343	
307	307	DZK15_IMG_9234-4446.png	0.96413356	2715	62619	38	
308	308	DZK15_IMG_2223-6669.png	0.8805071	36604	18997	2120	
309	309	KBY15_IMG_3933-13167.png	0.8444375	29690	24907	296	
310	310	KBY15_IMG_6669-9918.png	0.94715685	1649	63703	159	
311	311	DZKN15_IMG_8721-4788.png	0.9520259	3830	61320	157	
312	312	DZK15_IMG_8208-3078.png	0.9788479	11708	53322	333	
313	313	DZK15_IMG_5472-9234.png	0.89648	28907	29953	1450	
314	314	KBY15_IMG_11970-4446.png	0.98229796	10127	55044	237	
315	315	KBY15_IMG_16074-21717.png	0.91161716	35167	23550	1392	
316	316	DZK15_IMG_5643-1710.png	0.9235636	35765	23851	798	
317	317	DZK15_IMG_5643-2736.png	0.98168784	10132	55026	32	
318	318	KBY15_IMG_15390-22743.png	0.70187193	1781	62242	11	
319	319	DZK15_IMG_4104-13680.png	0.88066226	21648	38021	739	
320	320	DZKN15_IMG_4617-4617.png	0.7868415	3540	60078	90	
321	321	KBY15_IMG_3762-13509.png	0.60677576	16737	27106	307	
322	322	DZK15_IMG_7695-5301.png	0.9100562	35226	23347	1368	
323	323	KBY15_IMG_14877-22572.png	0.9120456	18240	43778	2	
324	324	DZKN15_IMG_6156-1539.png	0.84278506	28779	26020	1355	
325	325	KBY15_IMG_3078-17613.png	0.8859952	6668	57152	776	
326	326	KBY15_IMG_12654-21204.png	0.8973024	37920	18936	2646	
327	327	DZK15_IMG_6669-3420.png	0.8801191	35482	20388	1120	
328	328	DZK15_IMG_3249-10602.png	0.9479473	18357	45163	147	
329	329	DZK15_IMG_5130-6840.png	0.61059505	1775	61497	66	
330	330	DZKN15_IMG_6840-5472.png	0.5593384	1454	61791	34	
331	331	KBY15_IMG_10773-10773.png	0.92222136	42205	16212	489	
332	332	DZK15_IMG_4788-3933.png	0.86780286	2826	61849	422	
333	333	DZKN15_IMG_8892-5130.png	0.9070345	14235	48383	1071	

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative
334	334	KBY15_IMG_15390-2736.png	0.95548964	6601	58320	309	
335	335	DZK15_IMG_4104-10602.png	0.7874297	24017	28552	5178	
336	336	DZK15_IMG_3420-6327.png	0.832908	5548	57762	1749	
337	337	KBY15_IMG_7353-16074.png	0.0001316569	1	50346	83	
338	338	KBY15_IMG_9918-13338.png	0.9490364	3324	61855	169	
339	339	DZK15_IMG_2736-7524.png	0.8815	17325	43553	1831	
340	340	KBY15_IMG_13509-22572.png	0.9590603	2776	62523	198	
341	341	KBY15_IMG_29241-12825.png	0.97207445	4386	60898	174	
342	342	DZK15_IMG_7011-5643.png	0.8957954	32512	25460	915	
343	343	DZK15_IMG_6669-4104.png	0.97817093	8514	56642	70	
344	344	DZK15_IMG_5643-5814.png	0.90870583	4076	60641	642	
345	345	KBY15_IMG_9918-3762.png	0.9359182	6638	57989	280	
346	346	DZK15_IMG_6840-3762.png	0.9534321	4924	60131	352	
347	347	DZK15_IMG_1710-6498.png	0.9601889	8743	56068	21	
348	348	DZK15_IMG_8379-2907.png	0.94256914	15567	48072	354	
349	349	DZK15_IMG_7866-2223.png	0.86267364	31463	24056	2642	
350	350	KBY15_IMG_7353-17100.png	0.85003185	26725	29381	4126	
351	351	DZKN15_IMG_0-6669.png	0.77675277	1684	62884	46	
352	352	KBY15_IMG_15048-3591.png	0.9240158	6208	58307	61	
353	353	DZK15_IMG_4788-10773.png	0.88539326	394	65040	11	
354	354	KBY15_IMG_28044-12312.png	0.9585106	35035	27468	1252	
355	355	DZK15_IMG_3933-6840.png	0.8228214	1709	63091	17	
356	356	DZK15_IMG_3249-13680.png	0.6232558	4757	55028	572	
357	357	DZK15_IMG_5472-9405.png	0.8369728	8394	53872	839	
358	358	KBY15_IMG_12825-21888.png	0.87558305	10514	52034	2259	
359	359	DZK15_IMG_4959-6156.png	0.9240454	35378	24342	1204	
360	360	DZK15_IMG_4788-7182.png	0.8761076	13991	47588	1373	
361	361	DZK15_IMG_2052-12654.png	0.90672666	6450	57759	521	

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		id	png	Dice_score	True_Positive	True_Negative	False_Neg
362	362	362	DZKN15_IMG_1197-5814.png	0.8930905	37316	19286	813
363	363	363	DZK15_IMG_1710-13338.png	0.90680456	34722	23677	1178
364	364	364	DZKN15_IMG_855-7011.png	0.87797344	31870	24807	1283
365	365	365	KBY15_IMG_30438-23940.png	0.95472676	2035	63308	50
366	366	366	DZKN15_IMG_5814-1881.png	0.76957387	29158	18917	653
367	367	367	DZK15_IMG_2736-9918.png	0.91567117	14295	48608	61
368	368	368	DZK15_IMG_1368-9918.png	0.90391016	25521	34589	535
369	369	369	DZK15_IMG_4959-11457.png	0.86613226	36462	17803	992
370	370	370	DZK15_IMG_3762-6669.png	0.6346154	165	65181	1
371	371	371	DZK15_IMG_4959-8892.png	0.95580846	13691	50579	26
372	372	372	DZK15_IMG_8208-6327.png	0.88444513	39762	15384	1088
373	373	373	DZKN15_IMG_4788-4104.png	0.96192616	6872	58120	61
374	374	374	DZKN15_IMG_7182-4104.png	0.8738377	20817	38708	565
375	375	375	DZKN15_IMG_5814-1710.png	0.9080528	34432	24131	2351
376	376	376	KBY15_IMG_29070-12483.png	0.8154974	13629	45740	1687
377	377	377	KBY15_IMG_17955-25650.png	0.9387101	7321	57259	418
378	378	378	DZK15_IMG_6327-6327.png	0.84948915	1871	63002	604
379	379	379	DZK15_IMG_6327-5472.png	0.87078637	36088	18738	4732
380	380	380	KBY15_IMG_20349-15561.png	0.78196853	4302	58835	23
381	381	381	DZK15_IMG_8379-1026.png	0.797614	936	64125	26
382	382	382	DZKN15_IMG_2223-6156.png	0.73302096	7118	53233	2152
383	383	383	DZK15_IMG_4959-8379.png	0.94566816	12880	51176	189
384	384	384	DZK15_IMG_2052-4275.png	0.79390395	23442	29923	9901
385	385	385	DZK15_IMG_1710-12312.png	0.85800153	2284	62496	748
386	386	386	DZK15_IMG_6498-7524.png	0.13349664	218	62488	580
387	387	387	DZK15_IMG_5643-11799.png	0.8388581	37744	13291	852
388	388	388	DZK15_IMG_3249-3591.png	0.935783	13625	50041	537
389	389	389	DZK15_IMG_3591-11286.png	0.734246	20140	30817	4369

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative
390	390	KBY15_IMG_12825-10602.png	0.97045845	1429	64020	68	
391	391	DZKN15_IMG_5985-4617.png	0.9260463	4990	59749	18	
392	392	DZK15_IMG_3933-13851.png	0.9248614	29861	30823	813	
393	393	DZK15_IMG_3420-13167.png	0.5441907	274	64803	2	
394	394	KBY15_IMG_14364-3420.png	0.96047056	4082	61118	287	
395	395	DZKN15_IMG_5814-2907.png	0.8711392	32365	23596	1575	
396	396	KBY15_IMG_29070-12996.png	0.93453246	3533	61508	164	
397	397	DZK15_IMG_3762-4617.png	0.9623098	2783	62535	174	
398	398	KBY15_IMG_7524-9063.png	0.85228777	9304	53007	373	
399	399	DZK15_IMG_2565-13680.png	0.82389313	25048	29780	4105	
400	400	KBY15_IMG_32490-23256.png	0.6925005	5111	55886	3401	
401	401	DZKN15_IMG_7695-4788.png	0.9466036	5602	59302	44	
402	402	DZK15_IMG_3591-6498.png	0.9690346	1596	63838	81	
403	403	DZK15_IMG_4617-4446.png	0.68454534	3497	58816	24	
404	404	DZK15_IMG_5814-8892.png	0.8975045	31182	27232	1135	
405	405	DZKN15_IMG_7524-3591.png	0.89856625	10905	52169	562	
406	406	KBY15_IMG_28386-22059.png	0.91073805	33828	25077	2449	
407	407	KBY15_IMG_22914-9405.png	0.7512719	3913	59032	4	
408	408	DZKN15_IMG_8892-4788.png	0.87564677	9985	52715	724	
409	409	KBY15_IMG_27360-27189.png	0.9156822	42359	15376	873	
410	410	KBY15_IMG_31977-22230.png	0.8772373	35754	19775	1003	
411	411	DZK15_IMG_5130-5130.png	0.43331027	1254	61002	178	
412	412	DZK15_IMG_7182-4788.png	0.9769397	17200	47524	631	
413	413	KBY15_IMG_24624-17955.png	0.9176677	5768	58733	8	
414	414	KBY15_IMG_13338-21888.png	nan	0	64678	110	
415	415	KBY15_IMG_12996-21375.png	0.8351648	38	65483	15	
416	416	DZKN15_IMG_4617-5472.png	0.88876593	29703	28398	1867	
417	417	DZK15_IMG_7011-7695.png	0.78699154	4247	58990	776	

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		id	png	Dice_score	True_Positive	True_Negative	False_Neg
418	418		DZK15_IMG_4959-8550.png	0.97123855	8324	56719	265
419	419		DZKN15_IMG_6498-3762.png	0.880563	14701	46847	1329
420	420		DZK15_IMG_1710-7866.png	0.9527121	4110	61018	189
421	421		KBY15_IMG_28728-11457.png	0.7596931	1881	62465	92
422	422		KBY15_IMG_12483-21033.png	0.41628957	1012	61686	48
423	423		DZKN15_IMG_6840-5814.png	0.8753975	26286	31767	2314
424	424		DZK15_IMG_1881-7353.png	0.50359714	70	65328	122
425	425		KBY15_IMG_11115-10773.png	0.83304924	28100	26173	757
426	426		DZK15_IMG_4446-12825.png	0.8434977	24294	32227	1255
427	427		KBY15_IMG_11115-4446.png	0.9611343	4847	60297	269
428	428		DZK15_IMG_7524-1026.png	0.92128444	6642	57759	190
429	429		DZK15_IMG_6327-4788.png	0.8998576	34128	23812	1618
430	430		KBY15_IMG_7866-16758.png	0.8886941	2535	62366	307
431	431		DZK15_IMG_3420-2223.png	0.8078638	20115	35853	1736
432	432		DZK15_IMG_2052-8721.png	0.84774977	32710	21077	1426
433	433		DZKN15_IMG_6327-3591.png	0.81444645	24896	29296	1468
434	434		DZK15_IMG_5301-7524.png	0.0017353579	2	63233	0

[All dataset] EfficientNet B1 U-Net (ImageNet)

	id	png	Dice_score	True_Positive	True_Negative	False_Negative	F
0	0	DZK15_IMG_7695-3762.png	0.88294315	396	65035	9	9
1	1	DZKN15_IMG_6840-2907.png	nan	0	65510	23	3
2	2	DZK15_IMG_6840-3078.png	0.9258468	5631	59003	15	8
3	3	DZK15_IMG_7524-3249.png	0.95380676	16756	47157	615	1
4	4	KBY15_IMG_29925-23256.png	0.96540654	15935	48459	499	6
5	5	KBY15_IMG_3078-14535.png	0.9796664	10190	54923	174	2
6	6	DZK15_IMG_8037-4104.png	0.9253882	2741	62353	0	4
7	7	DZK15_IMG_3249-8208.png	0.7175343	15493	37845	3794	8
8	8	DZKN15_IMG_5985-3762.png	0.3786295	489	63442	1271	3
9	9	KBY15_IMG_11286-9747.png	0.8561474	24818	32378	1719	6
10	10	DZKN15_IMG_4617-5643.png	0.8961045	9259	54130	586	1
11	11	DZK15_IMG_1197-9918.png	0.5804935	494	64328	675	3
12	12	DZK15_IMG_4446-7182.png	0.86548454	2831	61825	417	4
13	13	DZK15_IMG_3591-9918.png	0.86393195	1727	63265	3	5
14	14	DZK15_IMG_2736-10260.png	0.88040984	19936	40184	610	4
15	15	KBY15_IMG_3933-13509.png	0.9208633	8576	55486	8	1
16	16	DZK15_IMG_7524-5985.png	0.8464756	24384	32307	1165	7
17	17	DZK15_IMG_5985-10773.png	0.9111579	16671	45614	982	2
18	18	DZK15_IMG_3933-8721.png	0.9772574	10098	54968	66	4
19	19	DZKN15_IMG_5643-684.png	0.68280137	14600	37371	229	1
20	20	KBY15_IMG_19836-15732.png	0.9331017	2148	63080	135	1
21	21	DZK15_IMG_7866-3078.png	0.950951	475	65012	3	4
22	22	DZK15_IMG_7524-7182.png	0.9049356	46506	9259	2635	7
23	23	DZK15_IMG_2394-13680.png	0.9203259	35693	23663	870	5
24	24	DZKN15_IMG_7866-4788.png	0.83929276	34035	18467	891	1
25	25	DZK15_IMG_7353-1539.png	0.8858096	1726	63365	0	4

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		id	png	Dice_score	True_Positive	True_Negative	False_Nega
26	26	KBY15_IMG_30780-24282.png	0.8172093	7028	55364	204	
27	27	DZK15_IMG_7182-7866.png	0.9516102	5644	59318	126	
28	28	KBY15_IMG_4104-13167.png	0.83220613	22703	33678	4822	
29	29	KBY15_IMG_7182-9918.png	0.94289434	16660	46858	276	
30	30	KBY15_IMG_7524-9405.png	0.95800525	5840	59184	0	
31	31	DZK15_IMG_3420-12312.png	0.8863045	17871	43080	417	
32	32	DZK15_IMG_3933-10602.png	0.9277965	1240	64103	14	
33	33	DZK15_IMG_2223-2736.png	0.6365925	3161	58766	54	
34	34	KBY15_IMG_9747-4104.png	0.94765455	6101	58761	0	
35	35	DZK15_IMG_3591-6156.png	0.8149223	8705	52877	626	
36	36	DZK15_IMG_3078-4446.png	0.80921715	15329	42979	3827	
37	37	DZK15_IMG_4788-9234.png	0.7395028	3540	59502	90	
38	38	KBY15_IMG_29583-12483.png	0.71983755	5140	56395	3372	
39	39	DZKN15_IMG_6669-3249.png	0.86083114	8969	53667	708	
40	40	DZK15_IMG_2736-11286.png	0.89939606	18242	43213	0	
41	41	DZK15_IMG_3762-7182.png	0.9538419	10322	54215	319	
42	42	DZKN15_IMG_5814-4788.png	nan	0	64251	1282	
43	43	DZK15_IMG_5301-2394.png	0.62207174	3399	58007	1502	
44	44	DZK15_IMG_2223-9576.png	0.84821427	4370	59602	587	
45	45	KBY15_IMG_12825-7695.png	0.9797667	6174	59107	69	
46	46	DZK15_IMG_4788-8721.png	0.6147186	2769	59296	296	
47	47	DZK15_IMG_8550-4959.png	0.69690335	12254	42623	3062	
48	48	DZK15_IMG_4104-7353.png	0.8669867	37469	16570	660	
49	49	DZK15_IMG_1368-6327.png	0.6816542	14736	37036	10884	
50	50	DZKN15_IMG_6156-4104.png	0.9707024	11000	53872	17	
51	51	DZK15_IMG_5814-3078.png	0.9040375	34706	23462	1853	
52	52	KBY15_IMG_14877-22743.png	0.84018135	32523	20640	630	
53	53	DZK15_IMG_4959-2907.png	0.8519333	3294	61097	259	

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative	F
54	54		KBY15_IMG_14193-3249.png	0.8198229	23706	31410	1490	8
55	55		KBY15_IMG_20178-22914.png	0.9414845	4135	60887	164	3
56	56		KBY15_IMG_8037-16416.png	nan	0	63432	11	2
57	57		KBY15_IMG_19836-15903.png	0.93051755	6984	57509	5	1
58	58		DZK15_IMG_3249-13509.png	0.6786026	777	64023	23	7
59	59		KBY15_IMG_23256-18810.png	0.85922647	3888	60374	458	8
60	60		DZK15_IMG_4617-5301.png	0.93107975	6390	58200	107	8
61	61		DZK15_IMG_3420-3249.png	0.8160844	14856	43984	1174	5
62	62		DZK15_IMG_6840-4617.png	0.8687103	19526	40108	1011	4
63	63		DZK15_IMG_1197-8208.png	0.87798846	15626	45567	3	4
64	64		KBY15_IMG_20520-23085.png	0.94979274	1031	64396	34	7
65	65		DZK15_IMG_4446-2565.png	0.8851291	994	64284	29	2
66	66		KBY15_IMG_12483-21717.png	0.90791774	37852	20006	3024	4
67	67		KBY15_IMG_10602-3762.png	0.8665069	39936	13295	5655	6
68	68		DZKN15_IMG_8379-4959.png	0.93358433	5208	59587	64	6
69	69		DZKN15_IMG_7182-4275.png	0.8787784	33811	22397	1935	7
70	70		KBY15_IMG_32661-24282.png	0.91376555	26851	33617	971	4
71	71		DZK15_IMG_3420-8892.png	0.8462946	3700	60492	1323	2
72	72		DZK15_IMG_4788-11628.png	0.8704273	37226	17227	3594	7
73	73		KBY15_IMG_30096-12654.png	0.8950478	35234	22039	1348	6
74	74		DZK15_IMG_2736-14022.png	0.92197704	6706	57695	940	1
75	75		KBY15_IMG_27702-27189.png	0.7912088	36	65481	17	2
76	76		KBY15_IMG_28557-24111.png	0.9098937	13395	49488	1384	1
77	77		DZK15_IMG_3420-12483.png	0.88964826	14318	47666	38	3
78	78		DZK15_IMG_3420-5814.png	0.88579816	27768	30608	2695	4
79	79		DZK15_IMG_2223-11457.png	0.8204589	7419	54870	59	3
80	80		DZK15_IMG_3420-8721.png	0.94096404	11205	52925	525	8
81	81		DZK15_IMG_7182-3762.png	0.945659	12112	52032	334	1

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		id	png	Dice_score	True_Positive	True_Negative	False_Nega
82	82		DZK15_IMG_4275-4446.png	0.88038987	13731	48074	685
83	83		KBY15_IMG_13509-22401.png	0.8778015	33762	22374	793
84	84		DZK15_IMG_4788-11115.png	0.43487468	1848	58885	113
85	85		KBY15_IMG_7011-10431.png	0.84442335	32881	20539	1059
86	86		DZKN15_IMG_1026-7011.png	0.59999996	813	63639	398
87	87		DZKN15_IMG_8550-4275.png	0.83421326	3160	61120	6
88	88		DZK15_IMG_7695-2907.png	0.3651226	402	63736	0
89	89		DZK15_IMG_5130-11457.png	0.913179	6742	57512	5
90	90		KBY15_IMG_14535-22914.png	0.9628438	8383	56506	206
91	91		DZK15_IMG_2394-10431.png	0.65558815	1006	63473	54
92	92		KBY15_IMG_7524-17271.png	0.60433203	10658	40922	697
93	93		KBY15_IMG_7695-15903.png	0.8782925	18456	41965	391
94	94		KBY15_IMG_15048-2223.png	0.91181564	4746	59872	23
95	95		DZK15_IMG_4275-4275.png	0.9867092	6793	58560	117
96	96		DZK15_IMG_6498-3420.png	0.8795202	30354	26866	2080
97	97		DZK15_IMG_4104-12996.png	0.9232257	6680	57745	238
98	98		DZK15_IMG_3591-4275.png	0.7212863	942	63866	20
99	99		DZK15_IMG_2907-12825.png	0.8647019	2582	62146	285
100	100		DZK15_IMG_2565-5643.png	0.86918783	24638	33482	176
101	101		DZK15_IMG_7011-5472.png	0.9374148	6186	58524	329
102	102		DZK15_IMG_5301-3420.png	0.92227817	20695	41353	551
103	103		KBY15_IMG_11970-3762.png	0.8866286	32166	25144	4111
104	104		DZK15_IMG_2565-11115.png	0.88284266	2174	62785	8
105	105		DZK15_IMG_6156-3078.png	0.9450519	6828	57914	536
106	106		KBY15_IMG_30438-24111.png	0.954702	7482	57344	257
107	107		DZK15_IMG_1539-12483.png	nan	0	64192	11
108	108		KBY15_IMG_19836-16416.png	0.9434629	267	65237	10
109	109		KBY15_IMG_13680-22401.png	0.9049847	29693	29608	773

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				Dice_score	True_Positive	True_Negative	False_Negative	F1_Score
110	110	DZK15_IMG_6156-1710.png		0.74354804	17618	35765	692	1.0
111	111	DZK15_IMG_4275-9918.png		0.42113668	1319	60591	113	0.3
112	112	KBY15_IMG_23085-9234.png		0.005337046	46	48344	38	0.1
113	113	DZK15_IMG_2907-10944.png		0.8986722	7614	56205	1503	0.2
114	114	DZK15_IMG_2907-3762.png		0.779781	16198	40189	2953	0.6
115	115	DZK15_IMG_2394-11799.png		0.81063306	25768	27729	1574	0.1
116	116	DZK15_IMG_2736-9747.png		0.358804	108	65042	0	0.3
117	117	DZK15_IMG_7353-6327.png		0.85825986	18111	41443	790	0.5
118	118	DZK15_IMG_5643-3933.png		0.91883373	2915	62106	130	0.3
119	119	DZK15_IMG_3591-9405.png		0.90975094	4511	60130	6	0.8
120	120	DZK15_IMG_1368-10602.png		0.89476484	10930	52035	1843	0.7
121	121	DZK15_IMG_5472-4446.png		0.7388091	29296	15526	515	0.2
122	122	DZK15_IMG_2565-5130.png		0.8831459	6715	57044	616	0.1
123	123	KBY15_IMG_22743-9576.png		0.8821024	13359	48606	351	0.3
124	124	DZK15_IMG_4104-9405.png		0.9695211	3340	61986	79	0.1
125	125	KBY15_IMG_10773-3420.png		0.59016395	2880	58656	1346	0.2
126	126	DZK15_IMG_8721-4446.png		0.871662	33620	22016	485	0.9
127	127	KBY15_IMG_13680-20520.png		0.8357116	31274	21966	1145	0.1
128	128	KBY15_IMG_20007-23598.png		0.8792935	32908	23593	2493	0.6
129	129	KBY15_IMG_10773-2907.png		0.8543546	4640	59314	33	0.1
130	130	DZK15_IMG_5301-1368.png		0.96970373	8690	56303	329	0.2
131	131	KBY15_IMG_7011-16245.png		0.019047618	1	65432	1	0.1
132	132	DZK15_IMG_4788-4446.png		0.9214703	22148	39613	63	0.3
133	133	DZKN15_IMG_6840-4617.png		0.828606	30119	22957	1117	0.1
134	134	DZK15_IMG_5985-8550.png		0.90016836	10694	52470	773	0.1
135	135	KBY15_IMG_7011-9918.png		0.76346266	21259	31104	996	0.1
136	136	DZK15_IMG_4104-1710.png		0.9354816	6677	57938	155	0.7
137	137	DZK15_IMG_7353-6156.png		0.792694	6141	56183	1219	0.1

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		id	png	Dice_score	True_Positive	True_Negative	False_Nega
138	138		DZK15_IMG_1881-6156.png	0.8691374	24999	33009	1143
139	139		DZK15_IMG_6840-9063.png	0.94132715	7348	57272	86
140	140		DZKN15_IMG_2565-6498.png	0.87212634	36969	17726	1559
141	141		DZK15_IMG_7011-7353.png	0.69411874	11277	44320	1436
142	142		DZK15_IMG_5472-3420.png	0.9258793	9200	54863	933
143	143		DZK15_IMG_5814-5814.png	0.7122491	8818	49593	130
144	144		DZKN15_IMG_6840-2736.png	0.9599105	4717	60425	113
145	145		DZK15_IMG_6156-4446.png	0.58124125	1667	61467	174
146	146		DZKN15_IMG_2052-4275.png	0.9698878	2464	62919	112
147	147		KBY15_IMG_3591-14877.png	0.9186046	237	65257	17
148	148		DZK15_IMG_4275-2565.png	0.7921884	25150	27191	1738
149	149		DZKN15_IMG_1881-5472.png	0.7972107	26752	25174	1119
150	150		KBY15_IMG_3078-16929.png	0.9546828	790	64671	18
151	151		KBY15_IMG_3249-14706.png	0.79283804	27498	23668	1559
152	152		DZK15_IMG_4617-10260.png	0.90707743	36245	21865	981
153	153		DZK15_IMG_2394-4959.png	0.9556249	5513	59511	359
154	154		KBY15_IMG_14877-3420.png	0.98759156	13013	52196	160
155	155		KBY15_IMG_23256-18468.png	0.9524501	7211	57605	69
156	156		DZK15_IMG_3249-11115.png	0.7956131	23722	29626	9621
157	157		DZK15_IMG_3762-4959.png	0.9530311	6980	57868	317
158	158		DZK15_IMG_5472-2907.png	0.94865036	5219	59752	312
159	159		KBY15_IMG_7353-16929.png	0.5376071	2323	59217	487
160	160		DZK15_IMG_3591-11799.png	0.91206443	5772	58651	4
161	161		KBY15_IMG_6669-16587.png	0.9069804	8634	55131	189
162	162		KBY15_IMG_19836-16074.png	0.03626943	35	63641	14
163	163		DZK15_IMG_7524-3762.png	0.8975391	37803	19102	2763
164	164		DZKN15_IMG_8721-5130.png	0.002403846	1	64705	109
165	165		KBY15_IMG_14877-2394.png	0.8751957	16497	44334	14

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				Dice_score	True_Positive	True_Negative	False_Negative	F1
166	166	KBY15_IMG_12996-7353.png		0.83914036	8610	53625	94	3
167	167	KBY15_IMG_14706-23085.png		0.86542445	209	65262	48	1
168	168	KBY15_IMG_28044-13167.png		0.9072624	10600	52769	429	1
169	169	DZK15_IMG_1881-7011.png		0.6476039	1223	62982	29	1
170	170	DZK15_IMG_3933-12654.png		0.8870351	30624	27112	2370	5
171	171	KBY15_IMG_17955-24453.png		0.96588296	5464	59686	31	3
172	172	DZKN15_IMG_6840-3933.png		0.9582559	2835	62454	122	1
173	173	DZK15_IMG_5643-11970.png		0.96825856	3325	61993	63	1
174	174	DZK15_IMG_7353-1710.png		0.8429172	32564	20835	5072	7
175	175	DZK15_IMG_4617-1710.png		0.87245095	5626	58265	1504	1
176	176	KBY15_IMG_28215-22059.png		0.9061294	4228	60432	141	7
177	177	DZK15_IMG_6669-5814.png		0.85834205	409	64992	82	5
178	178	DZK15_IMG_5472-10944.png		0.8269039	37319	12593	7294	8
179	179	DZK15_IMG_6156-4104.png		0.96590143	2861	62473	113	8
180	180	KBY15_IMG_27018-15903.png		0.81839913	4279	59358	67	1
181	181	KBY15_IMG_15048-2736.png		0.8900383	14626	47296	738	2
182	182	KBY15_IMG_7695-10089.png		0.91860026	8571	55446	376	1
183	183	KBY15_IMG_12825-21546.png		0.729927	100	65362	71	3
184	184	KBY15_IMG_19665-15903.png		0.94627166	20888	42276	1126	1
185	185	DZK15_IMG_3762-9918.png		0.77226084	17272	38077	2698	7
186	186	DZKN15_IMG_1881-5814.png		0.98094016	11863	53212	178	2
187	187	DZK15_IMG_5814-1368.png		0.8018119	28676	22684	1663	1
188	188	KBY15_IMG_10431-4617.png		0.8429486	36879	14915	1717	1
189	189	KBY15_IMG_11286-4617.png		0.887764	34285	22582	2309	6
190	190	DZK15_IMG_3249-7866.png		0.7855575	9127	51426	506	4
191	191	DZK15_IMG_4788-9918.png		0.88683	31157	26427	1160	6
192	192	DZK15_IMG_1710-4788.png		0.014285713	2	65258	190	8
193	193	DZKN15_IMG_5130-3249.png		0.8539023	30679	24359	2650	7

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		id	png	Dice_score	True_Positive	True_Negative	False_Nega
194	194	194	KBY15_IMG_16416-4446.png	0.93280977	7365	57110	304
195	195	195	DZK15_IMG_4959-1710.png	0.77791727	6813	54833	410
196	196	196	DZK15_IMG_4788-5643.png	0.6203435	8776	46018	659
197	197	197	DZK15_IMG_1710-2907.png	0.664005	8066	49307	2300
198	198	198	DZK15_IMG_5814-6840.png	0.9059518	28335	31318	1144
199	199	199	DZK15_IMG_2907-10431.png	0.6994883	11757	43677	267
200	200	200	KBY15_IMG_10602-3078.png	0.9486839	5010	59984	0
201	201	201	DZK15_IMG_2907-7182.png	0.9160753	37369	21320	1562
202	202	202	DZK15_IMG_1881-5301.png	0.85342693	12763	48389	306
203	203	203	DZKN15_IMG_4788-3249.png	0.83002913	29454	24019	532
204	204	204	DZK15_IMG_3078-10089.png	0.847228	33826	19511	631
205	205	205	DZKN15_IMG_7866-5301.png	0.9182445	42315	15686	379
206	206	206	DZK15_IMG_3591-7353.png	0.9305136	616	64828	12
207	207	207	KBY15_IMG_27873-13167.png	0.8537713	25757	30956	299
208	208	208	DZK15_IMG_7524-4104.png	0.9301784	19577	43020	75
209	209	209	KBY15_IMG_28557-22914.png	0.6692935	11975	41727	710
210	210	210	DZK15_IMG_5643-9747.png	0.9692708	1861	63557	39
211	211	211	DZK15_IMG_3762-14022.png	0.74732476	27586	19296	4856
212	212	212	DZK15_IMG_5814-3933.png	0.952765	13706	50471	11
213	213	213	DZK15_IMG_6327-1881.png	0.94780916	17997	45557	1666
214	214	214	DZK15_IMG_2907-3933.png	0.51648015	4223	53406	6126
215	215	215	KBY15_IMG_12825-21204.png	0.8768591	18571	41749	1822
216	216	216	DZKN15_IMG_855-6840.png	0.8803094	12632	49469	1530
217	217	217	DZK15_IMG_4446-3078.png	0.8995721	6727	57307	94
218	218	218	KBY15_IMG_7182-16587.png	0.87908673	2541	62296	301
219	219	219	DZK15_IMG_4275-9234.png	0.8798101	6299	57516	7
220	220	220	DZK15_IMG_6327-2907.png	0.9461942	7931	56703	339
221	221	221	KBY15_IMG_30267-12825.png	0.60389596	16663	27014	381

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				Dice_score	True_Positive	True_Negative	False_Negative	F1
222	222	DZK15_IMG_2565-3762.png		0.9302268	3773	61197	214	3
223	223	DZK15_IMG_7011-5985.png		0.8700005	37370	16998	986	1
224	224	KBY15_IMG_10944-4959.png		0.02587322	10	64773	709	4
225	225	DZK15_IMG_4446-4617.png		0.86518353	38890	14526	1046	1
226	226	KBY15_IMG_29241-23769.png		0.85005826	26620	29525	1980	7
227	227	DZK15_IMG_3933-2052.png		0.91286594	33855	25218	2850	3
228	228	KBY15_IMG_15219-2052.png		0.90830946	14582	48010	209	2
229	229	KBY15_IMG_6840-16416.png		0.9731195	17413	47161	418	5
230	230	DZK15_IMG_5814-2394.png		0.83571583	28500	25831	1066	1
231	231	DZK15_IMG_2052-7011.png		0.85512525	37599	15197	482	1
232	232	DZKN15_IMG_2736-6498.png		0.8542514	36465	16628	1887	1
233	233	DZK15_IMG_4959-11628.png		0.6541555	854	63779	8	8
234	234	KBY15_IMG_27873-12996.png		0.85083616	29892	25163	1013	9
235	235	DZK15_IMG_5985-6669.png		0.78399193	18679	36564	7318	2
236	236	KBY15_IMG_28728-11970.png		0.60663503	2240	60391	235	2
237	237	DZK15_IMG_2052-3420.png		0.60425425	4744	54578	585	5
238	238	KBY15_IMG_29241-22914.png		0.8626236	4317	59844	8	1
239	239	DZK15_IMG_2052-13338.png		0.89907455	1020	64287	212	1
240	240	DZK15_IMG_1539-7524.png		0.8354992	33110	19388	1026	1
241	241	DZK15_IMG_3591-13509.png		0.8002832	24307	29097	3844	8
242	242	DZK15_IMG_3762-10260.png		0.89971787	36354	21078	1473	6
243	243	DZK15_IMG_5643-11115.png		0.86611557	36460	17804	994	1
244	244	DZK15_IMG_4104-2052.png		0.9303094	34621	25728	1304	3
245	245	DZK15_IMG_1881-12996.png		nan	0	65507	0	2
246	246	KBY15_IMG_27702-11457.png		0.87478316	2522	62292	301	4
247	247	DZK15_IMG_3078-9576.png		0.8315806	21034	35982	2020	6
248	248	DZK15_IMG_3591-8379.png		0.8266475	577	64717	33	2
249	249	DZK15_IMG_2565-4788.png		0.9788619	10674	54401	238	2

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		id	png	Dice_score	True_Positive	True_Negative	False_Nega
250	250	DZK15_IMG_6840-7353.png	0.94614923	18422	45017	82	
251	251	KBY15_IMG_15732-2907.png	0.84082663	2665	61862	522	
252	252	DZKN15_IMG_7011-4104.png	0.96985835	4553	60700	131	
253	253	DZKN15_IMG_5814-513.png	0.8056112	23517	30670	3609	
254	254	KBY15_IMG_2565-17613.png	0.7495176	16121	38640	5395	
255	255	DZK15_IMG_7011-8721.png	0.9655944	1726	63687	43	
256	256	DZKN15_IMG_7695-3420.png	0.95805407	4431	60717	251	
257	257	DZK15_IMG_2565-10089.png	0.84609824	33937	19253	2665	
258	258	DZK15_IMG_6327-7866.png	0.8978202	17525	44022	2757	
259	259	DZKN15_IMG_4788-4959.png	0.6785232	1507	62601	69	
260	260	DZK15_IMG_5301-1881.png	0.9518194	3309	61892	63	
261	261	KBY15_IMG_23769-19323.png	0.89977175	2168	62885	380	
262	262	DZKN15_IMG_5301-684.png	0.9440499	29646	32376	1028	
263	263	DZK15_IMG_3249-12825.png	0.8858309	33860	22948	2450	
264	264	DZK15_IMG_4788-5814.png	0.9750302	2831	62560	71	
265	265	DZK15_IMG_4446-2736.png	0.76662415	2104	62151	257	
266	266	DZK15_IMG_7524-4275.png	0.5818399	487	64349	108	
267	267	KBY15_IMG_14877-2565.png	0.63930887	1036	63331	0	
268	268	DZK15_IMG_2223-11628.png	0.96014845	4915	60213	201	
269	269	KBY15_IMG_15561-2565.png	0.87219065	24468	33897	233	
270	270	DZK15_IMG_4275-11286.png	0.913654	42066	15519	1166	
271	271	DZK15_IMG_2223-14022.png	0.9265045	36949	22725	1064	
272	272	KBY15_IMG_19836-22743.png	0.9234431	1164	64179	167	
273	273	DZKN15_IMG_1710-5985.png	0.9482709	4977	60016	240	
274	274	KBY15_IMG_2907-14706.png	0.97093153	4409	60863	151	
275	275	DZKN15_IMG_1710-4788.png	0.8284512	5020	58437	21	
276	276	DZK15_IMG_4959-12483.png	0.89878017	4826	59623	3	
277	277	DZK15_IMG_4617-9576.png	0.9679857	16267	48193	641	

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				Dice_Score	True_Positive	True_Negative	False_Negative	F1_Score
278	278	KBY15_IMG_9405-5301.png		0.853104	31683	22942	200	1.0
279	279	DZKN15_IMG_5814-855.png		0.56033427	3420	56749	101	0.5
280	280	DZK15_IMG_5643-2052.png		0.63539445	149	65216	17	1.0
281	281	DZK15_IMG_5130-11970.png		nan	0	65513	20	0.3
282	282	DZK15_IMG_4446-5130.png		0.9481399	20568	42718	131	0.2
283	283	DZKN15_IMG_5985-2907.png		0.8971083	2001	63076	0	0.4
284	284	KBY15_IMG_29070-11970.png		0.8974698	31888	26362	1341	0.5
285	285	DZKN15_IMG_5985-1368.png		0.7826639	29580	19528	1009	1.0
286	286	DZK15_IMG_1881-10944.png		0.8770209	2414	62445	0	0.6
287	287	KBY15_IMG_29412-22914.png		0.9541332	3682	61500	89	0.2
288	288	DZK15_IMG_6498-5643.png		0.8299211	26045	28816	3108	0.7
289	289	DZKN15_IMG_7011-4275.png		nan	0	61846	3687	0.3
290	290	DZK15_IMG_1881-13338.png		0.8920191	37236	19285	2236	0.6
291	291	KBY15_IMG_7524-8550.png		0.87760574	29280	28089	2007	0.6
292	292	DZK15_IMG_2565-14193.png		0.82448685	30849	21553	3260	0.9
293	293	KBY15_IMG_13851-22401.png		0.9589664	4008	61185	78	0.2
294	294	DZK15_IMG_2736-9576.png		0.86194235	6927	56390	12	0.2
295	295	DZK15_IMG_1539-10944.png		0.43486536	4797	48271	2	0.1
296	296	KBY15_IMG_17955-24624.png		0.87462246	34747	20827	2010	0.7
297	297	DZKN15_IMG_6669-3420.png		0.94076186	2803	62380	11	0.3
298	298	KBY15_IMG_14364-22743.png		0.86772966	26638	30777	3970	0.4
299	299	DZK15_IMG_4617-8721.png		0.9822779	8314	56922	60	0.2
300	300	KBY15_IMG_30951-21717.png		0.75264144	22510	28230	1415	0.1
301	301	DZK15_IMG_2736-5130.png		0.8751211	35659	19700	1227	0.8
302	302	KBY15_IMG_31806-22230.png		0.88604313	36497	19651	1230	0.8
303	303	DZK15_IMG_7353-5301.png		0.90517634	3952	60756	83	0.7
304	304	DZK15_IMG_7182-5130.png		0.93289346	10322	53729	387	0.1
305	305	DZK15_IMG_2223-4275.png		0.79996943	26177	26268	913	0.1

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		id	png	Dice_score	True_Positive	True_Negative	False_Nega
306	306		DZK15_IMG_6840-3249.png	0.91033876	7229	56883	12
307	307		DZK15_IMG_9234-4446.png	nan	0	65531	2
308	308		DZK15_IMG_2223-6669.png	0.84043735	7956	54559	155
309	309		KBY15_IMG_3933-13167.png	0.8604904	20160	38839	367
310	310		KBY15_IMG_6669-9918.png	0.8404758	4805	58907	385
311	311		DZKN15_IMG_8721-4788.png	0.96105427	7329	57613	74
312	312		DZK15_IMG_8208-3078.png	0.8922659	6899	56971	545
313	313		DZK15_IMG_5472-9234.png	0.9555456	10640	53906	362
314	314		KBY15_IMG_11970-4446.png	0.9121042	23665	37310	58
315	315		KBY15_IMG_16074-21717.png	0.970003	1633	63802	44
316	316		DZK15_IMG_5643-1710.png	0.97636384	8716	56398	48
317	317		DZK15_IMG_5643-2736.png	0.8847094	2893	61889	154
318	318		KBY15_IMG_15390-22743.png	0.50730413	191	64974	1
319	319		DZK15_IMG_4104-13680.png	0.91118044	14311	48435	129
320	320		DZKN15_IMG_4617-4617.png	0.88061243	24673	34173	129
321	321		KBY15_IMG_3762-13509.png	0.9030397	6105	58120	25
322	322		DZK15_IMG_7695-5301.png	0.8825264	29622	28028	1948
323	323		KBY15_IMG_14877-22572.png	0.8383794	8515	53738	96
324	324		DZKN15_IMG_6156-1539.png	0.9750543	10104	54915	307
325	325		KBY15_IMG_3078-17613.png	0.8983051	265	65211	11
326	326		KBY15_IMG_12654-21204.png	0.53585774	1401	61708	2
327	327		DZK15_IMG_6669-3420.png	0.91773975	6521	57846	249
328	328		DZK15_IMG_3249-10602.png	0.9011156	10703	52484	100
329	329		DZK15_IMG_5130-6840.png	0.3048264	360	63534	1291
330	330		DZKN15_IMG_6840-5472.png	0.83420193	28171	26167	1963
331	331		KBY15_IMG_10773-10773.png	0.95615864	1374	64036	32
332	332		DZK15_IMG_4788-3933.png	0.91352195	581	64845	55
333	333		DZKN15_IMG_8892-5130.png	0.8736458	39515	14591	1335

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				Dice_score	True_Positive	True_Negative	False_Negative	F1
334	334	KBY15_IMG_15390-2736.png		0.5869449	1097	62895	695	8
335	335	DZK15_IMG_4104-10602.png		0.88841504	5000	59280	8	1
336	336	DZK15_IMG_3420-6327.png		0.8391159	21658	35573	729	7
337	337	KBY15_IMG_7353-16074.png		0.9288635	7384	57021	63	1
338	338	KBY15_IMG_9918-13338.png		0.9462038	3421	61726	31	3
339	339	DZK15_IMG_2736-7524.png		0.8396579	18996	39285	5562	1
340	340	KBY15_IMG_13509-22572.png		0.88361317	29757	27940	2007	5
341	341	KBY15_IMG_29241-12825.png		0.8921989	8326	55198	3	2
342	342	DZK15_IMG_7011-5643.png		0.9521758	3315	61888	55	2
343	343	DZK15_IMG_6669-4104.png		0.18590143	149	64082	649	6
344	344	DZK15_IMG_5643-5814.png		0.9069625	5191	59280	138	9
345	345	KBY15_IMG_9918-3762.png		0.6236902	7053	49972	2217	6
346	346	DZK15_IMG_6840-3762.png		0.92141	35249	24274	1053	4
347	347	DZK15_IMG_1710-6498.png		0.7902709	24206	28482	2209	1
348	348	DZK15_IMG_8379-2907.png		0.79636586	24587	28375	1777	1
349	349	DZK15_IMG_7866-2223.png		0.4352709	1434	60381	54	3
350	350	KBY15_IMG_7353-17100.png		0.85311085	34670	18927	1241	1
351	351	DZKN15_IMG_0-6669.png		0.90242904	4384	60204	892	5
352	352	KBY15_IMG_15048-3591.png		nan	0	64353	2	1
353	353	DZK15_IMG_4788-10773.png		0.96972406	4340	60925	33	2
354	354	KBY15_IMG_28044-12312.png		0.6798144	879	63829	691	1
355	355	DZK15_IMG_3933-6840.png		0.8043861	27876	24102	981	1
356	356	DZK15_IMG_3249-13680.png		0.8845633	29084	28861	1273	6
357	357	DZK15_IMG_5472-9405.png		0.74011743	20230	31099	1621	1
358	358	KBY15_IMG_12825-21888.png		0.8294544	26837	27663	4014	7
359	359	DZK15_IMG_4959-6156.png		0.91101474	13775	49070	722	1
360	360	DZK15_IMG_4788-7182.png		0.7633576	4829	57713	0	2
361	361	DZK15_IMG_2052-12654.png		0.80632174	8112	53527	44	3

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		id	png	Dice_score	True_Positive	True_Negative	False_Nega
362	362	362	DZKN15_IMG_1197-5814.png	0.9657996	2005	63389	80
363	363	363	DZK15_IMG_1710-13338.png	0.8369141	9758	51975	27
364	364	364	DZKN15_IMG_855-7011.png	0.91916317	2746	62307	7
365	365	365	KBY15_IMG_30438-23940.png	0.8978873	34381	23335	1519
366	366	366	DZKN15_IMG_5814-1881.png	0.7798129	3917	59407	0
367	367	367	DZK15_IMG_2736-9918.png	0.80884516	25056	28637	2109
368	368	368	DZK15_IMG_1368-9918.png	0.94348043	15007	48731	99
369	369	369	DZK15_IMG_4959-11457.png	0.9410278	2234	63022	221
370	370	370	DZK15_IMG_3762-6669.png	0.87642634	1805	63222	0
371	371	371	DZK15_IMG_4959-8892.png	0.87579274	33697	22281	294
372	372	372	DZK15_IMG_8208-6327.png	0.877168	25187	33295	2874
373	373	373	DZKN15_IMG_4788-4104.png	0.8771043	27224	30683	2655
374	374	374	DZKN15_IMG_7182-4104.png	0.93590087	6877	57717	56
375	375	375	DZKN15_IMG_5814-1710.png	0.98419595	4079	61326	11
376	376	376	KBY15_IMG_29070-12483.png	0.7392557	11800	45412	3104
377	377	377	KBY15_IMG_17955-25650.png	0.56830835	2654	58850	456
378	378	378	DZK15_IMG_6327-6327.png	0.7674498	6696	54782	726
379	379	379	DZK15_IMG_6327-5472.png	0.7132695	20004	29449	8257
380	380	380	KBY15_IMG_20349-15561.png	0.93440515	15228	48170	1
381	381	381	DZK15_IMG_8379-1026.png	0.70610124	2847	60319	17
382	382	382	DZKN15_IMG_2223-6156.png	0.8853518	32901	24114	3882
383	383	383	DZK15_IMG_4959-8379.png	0.8512903	9517	52694	1439
384	384	384	DZK15_IMG_2052-4275.png	0.91538954	46440	10511	2585
385	385	385	DZK15_IMG_1710-12312.png	0.859642	36313	17365	2411
386	386	386	DZK15_IMG_6498-7524.png	0.9472838	6478	58337	159
387	387	387	DZK15_IMG_5643-11799.png	0.68783885	888	63842	98
388	388	388	DZK15_IMG_3249-3591.png	0.94389534	3390	61743	103
389	389	389	DZK15_IMG_3591-11286.png	0.9510055	10569	53878	170

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				Dice_score	True_Positive	True_Negative	False_Negative	F1
390	390	KBY15_IMG_12825-10602.png	0.64501196	4319	56463	177	4	
391	391	DZKN15_IMG_5985-4617.png	0.9223749	35273	24326	1014	4	
392	392	DZK15_IMG_3933-13851.png	0.9152855	7925	56144	222	1	
393	393	DZK15_IMG_3420-13167.png	0.6357836	9367	45437	1571	9	
394	394	KBY15_IMG_14364-3420.png	0.9097974	31025	28359	1950	4	
395	395	DZKN15_IMG_5814-2907.png	0.41379312	6	65513	14	3	
396	396	KBY15_IMG_29070-12996.png	0.2	1	65527	5	3	
397	397	DZK15_IMG_3762-4617.png	0.6916417	16016	35239	794	1	
398	398	KBY15_IMG_7524-9063.png	0.90074426	17306	44416	690	3	
399	399	DZK15_IMG_2565-13680.png	0.58816963	4216	55416	590	5	
400	400	KBY15_IMG_32490-23256.png	0.9701022	15380	49208	541	4	
401	401	DZKN15_IMG_7695-4788.png	0.8693886	32952	22683	475	9	
402	402	DZK15_IMG_3591-6498.png	0.7818265	20555	33509	3954	7	
403	403	DZK15_IMG_4617-4446.png	0.8034469	16363	41167	1661	6	
404	404	DZK15_IMG_5814-8892.png	0.20666666	155	64191	17	1	
405	405	DZKN15_IMG_7524-3591.png	0.91815376	20271	41651	2079	1	
406	406	KBY15_IMG_28386-22059.png	0.8348624	91	65409	33	3	
407	407	KBY15_IMG_22914-9405.png	nan	0	65529	4	3	
408	408	DZKN15_IMG_8892-4788.png	0.87706655	31513	25189	4012	4	
409	409	KBY15_IMG_27360-27189.png	0.9100725	28908	30915	1088	4	
410	410	KBY15_IMG_31977-22230.png	0.9034234	2507	62493	525	1	
411	411	DZK15_IMG_5130-5130.png	0.49023384	891	62792	0	1	
412	412	DZK15_IMG_7182-4788.png	0.8988817	5787	58447	37	1	
413	413	KBY15_IMG_24624-17955.png	0.90844154	4197	60493	521	3	
414	414	KBY15_IMG_13338-21888.png	0.15384614	3	65500	30	3	
415	415	KBY15_IMG_12996-21375.png	0.8945445	20193	40582	1189	3	
416	416	DZKN15_IMG_4617-5472.png	0.7442985	8616	51000	617	5	
417	417	DZK15_IMG_7011-7695.png	0.77960336	14448	42919	254	7	

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		id	png	Dice_score	True_Positive	True_Negative	False_Nega
418	418	DZK15_IMG_4959-8550.png	0.9577018	6351	58624	79	
419	419	DZKN15_IMG_6498-3762.png	0.937561	6727	57913	530	
420	420	DZK15_IMG_1710-7866.png	0.80318314	23971	29817	5224	
421	421	KBY15_IMG_28728-11457.png	0.8895204	6260	57721	9	
422	422	KBY15_IMG_12483-21033.png	0.8642161	35206	19267	1880	
423	423	DZKN15_IMG_6840-5814.png	0.7611292	4813	57702	300	
424	424	DZK15_IMG_1881-7353.png	0.95858634	1736	63650	72	
425	425	KBY15_IMG_11115-10773.png	0.97514087	1471	63990	26	
426	426	DZK15_IMG_4446-12825.png	0.6495956	1446	62530	527	
427	427	KBY15_IMG_11115-4446.png	0.95294416	7331	57481	402	
428	428	DZK15_IMG_7524-1026.png	0.8881907	6502	57397	469	
429	429	DZK15_IMG_6327-4788.png	0.96821404	15215	49322	91	
430	430	KBY15_IMG_7866-16758.png	0.96290284	3556	61706	67	
431	431	DZK15_IMG_3420-2223.png	0.8714988	2038	62897	0	
432	432	DZK15_IMG_2052-8721.png	0.95579964	1784	63587	91	
433	433	DZKN15_IMG_6327-3591.png	0.91196394	3636	61198	61	
434	434	DZK15_IMG_5301-7524.png	0.859886	1433	63636	68	

[All dataset] EfficientNet B1 U-Net (No ImageNet)

	id	png	Dice_score	True_Positive	True_Negative	False_Negative
0	0	DZK15_IMG_7695-3762.png	0.96289855	1661	63747	108
1	1	DZKN15_IMG_6840-2907.png	0.87783104	35115	20647	1771
2	2	DZK15_IMG_6840-3078.png	0.83571255	24295	31689	4305
3	3	DZK15_IMG_7524-3249.png	0.9721228	8282	56779	307
4	4	KBY15_IMG_29925-23256.png	0.8473711	10629	51078	2144
5	5	KBY15_IMG_3078-14535.png	0.785203	20897	33206	2157
6	6	DZK15_IMG_8037-4104.png	0.7338767	2071	61963	404
7	7	DZK15_IMG_3249-8208.png	0.5859264	2881	58583	184
8	8	DZKN15_IMG_5985-3762.png	0.88659436	32843	24291	2558
9	9	KBY15_IMG_11286-9747.png	0.8963087	31421	26845	1808
10	10	DZKN15_IMG_4617-5643.png	0.8843393	4989	59242	19
11	11	DZK15_IMG_1197-9918.png	0.50075114	1000	62542	60
12	12	DZK15_IMG_4446-7182.png	0.84386635	8045	54514	2867
13	13	DZK15_IMG_3591-9918.png	0.6858974	856	63896	130
14	14	DZK15_IMG_2736-10260.png	0.8324494	19148	38680	5410
15	15	KBY15_IMG_3933-13509.png	0.8479248	29225	25828	3209
16	16	DZK15_IMG_7524-5985.png	nan	0	65500	33
17	17	DZK15_IMG_5985-10773.png	0.80488235	25223	28084	1867
18	18	DZK15_IMG_3933-8721.png	0.97142416	6306	58859	124
19	19	DZKN15_IMG_5643-684.png	0.9409283	2007	63277	78
20	20	KBY15_IMG_19836-15732.png	0.63973063	190	65132	2
21	21	DZK15_IMG_7866-3078.png	0.5630323	6610	48666	4328
22	22	DZK15_IMG_7524-7182.png	0.89620984	35882	21343	1945
23	23	DZK15_IMG_2394-13680.png	0.6016103	6538	50339	685
24	24	DZKN15_IMG_7866-4788.png	0.9683244	3271	62051	117
25	25	DZK15_IMG_7353-1539.png	0.9430317	4784	60174	492

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		id	png	Dice_score	True_Positive	True_Negative	False_Ne
26	26	KBY15_IMG_30780-24282.png	0.9056358	13201	49584	509	
27	27	DZK15_IMG_7182-7866.png	0.45079005	1184	61467	789	
28	28	KBY15_IMG_4104-13167.png	nan	0	65527	4	
29	29	KBY15_IMG_7182-9918.png	0.7981078	23452	30219	3674	
30	30	KBY15_IMG_7524-9405.png	0.90263253	8246	55511	365	
31	31	DZK15_IMG_3420-12312.png	0.87075007	3355	61185	198	
32	32	DZK15_IMG_3933-10602.png	0.90574723	13766	48905	674	
33	33	DZK15_IMG_2223-2736.png	0.8601119	4304	59832	719	
34	34	KBY15_IMG_9747-4104.png	0.75242436	2638	61162	229	
35	35	DZK15_IMG_3591-6156.png	0.7944401	26920	24685	951	
36	36	DZK15_IMG_3078-4446.png	0.7077126	8075	50791	81	
37	37	DZK15_IMG_4788-9234.png	0.9495698	10375	54059	627	
38	38	KBY15_IMG_29583-12483.png	0.8666856	35096	19643	2631	
39	39	DZKN15_IMG_6669-3249.png	nan	0	65514	20	
40	40	DZK15_IMG_2736-11286.png	0.810201	4273	59261	944	
41	41	DZK15_IMG_3762-7182.png	0.785983	24964	26977	4231	
42	42	DZKN15_IMG_5814-4788.png	0.9865338	8315	56994	59	
43	43	DZK15_IMG_5301-2394.png	0.8468481	24302	32444	1247	
44	44	DZK15_IMG_2223-9576.png	0.93490565	23626	38620	97	
45	45	KBY15_IMG_12825-7695.png	0.82598	28213	25435	1773	
46	46	DZK15_IMG_4788-8721.png	0.83286285	32308	20261	845	
47	47	DZK15_IMG_8550-4959.png	0.9206975	2798	62256	44	
48	48	DZK15_IMG_4104-7353.png	0.64541316	496	64495	99	
49	49	DZK15_IMG_1368-6327.png	0.95084137	10029	54470	612	
50	50	DZKN15_IMG_6156-4104.png	0.9339739	6026	58658	489	
51	51	DZK15_IMG_5814-3078.png	0.9694032	1600	63835	77	
52	52	KBY15_IMG_14877-22743.png	0.7569546	2585	61291	238	
53	53	DZK15_IMG_4959-2907.png	0.8667053	4493	59661	67	

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative
54	54		KBY15_IMG_14193-3249.png	0.9312486	2025	63212	13
55	55		KBY15_IMG_20178-22914.png	0.9536132	7370	57449	77
56	56		KBY15_IMG_8037-16416.png	0.8408469	36716	14921	7897
57	57		KBY15_IMG_19836-15903.png	0.92645967	8743	55405	80
58	58		DZK15_IMG_3249-13509.png	0.96365106	1193	64253	61
59	59		KBY15_IMG_23256-18810.png	0.78198004	10762	48773	1262
60	60		DZK15_IMG_4617-5301.png	0.9372001	6641	58005	723
61	61		DZK15_IMG_3420-3249.png	0.84661406	3113	61295	53
62	62		DZK15_IMG_6840-4617.png	0.72952795	20232	30302	1619
63	63		DZK15_IMG_1197-8208.png	0.7526262	18270	35256	5655
64	64		KBY15_IMG_20520-23085.png	0.9319371	8010	56356	1107
65	65		DZK15_IMG_4446-2565.png	0.8621789	2299	62502	733
66	66		KBY15_IMG_12483-21717.png	0.8798393	33067	23437	1038
67	67		KBY15_IMG_10602-3762.png	0.023833169	108	56581	0
68	68		DZKN15_IMG_8379-4959.png	0.8696093	28281	28774	3289
69	69		DZKN15_IMG_7182-4275.png	0.7834274	14229	43440	4922
70	70		KBY15_IMG_32661-24282.png	0.92457455	6981	57416	8
71	71		DZK15_IMG_3420-8892.png	0.96214896	2758	62561	199
72	72		DZK15_IMG_4788-11628.png	0.9144793	31844	27736	1131
73	73		KBY15_IMG_30096-12654.png	0.7811946	23828	28360	1368
74	74		DZK15_IMG_2736-14022.png	0.9704936	1809	63617	91
75	75		KBY15_IMG_27702-27189.png	0.79490024	17925	38361	976
76	76		KBY15_IMG_28557-24111.png	0.5805951	16830	24391	214
77	77		DZK15_IMG_3420-12483.png	0.8316895	32297	20167	1839
78	78		DZK15_IMG_3420-5814.png	0.83477455	25873	29421	4006
79	79		DZK15_IMG_2223-11457.png	0.85380423	25939	30714	4735
80	80		DZK15_IMG_3420-8721.png	0.9282209	15227	47954	2
81	81		DZK15_IMG_7182-3762.png	0.8521275	11165	50496	302

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		id	png	Dice_score	True_Positive	True_Negative	False_Ne
82	82		DZK15_IMG_4275-4446.png	0.93425965	42229	17364	465
83	83		KBY15_IMG_13509-22401.png	nan	0	65530	0
84	84		DZK15_IMG_4788-11115.png	0.8940908	10561	52473	468
85	85		KBY15_IMG_7011-10431.png	0.83821917	8764	53389	567
86	86		DZKN15_IMG_1026-7011.png	0.8200623	8960	52644	1996
87	87		DZKN15_IMG_8550-4275.png	0.85277355	4712	59197	478
88	88		DZK15_IMG_7695-2907.png	0.8800947	12643	49448	2136
89	89		DZK15_IMG_5130-11457.png	0.9580305	7316	57579	118
90	90		KBY15_IMG_14535-22914.png	nan	0	64318	11
91	91		DZK15_IMG_2394-10431.png	0.44606486	1774	59356	187
92	92		KBY15_IMG_7524-17271.png	0.93007547	14598	48743	193
93	93		KBY15_IMG_7695-15903.png	0.6198112	4793	54863	6
94	94		KBY15_IMG_15048-2223.png	0.73824203	5690	55811	182
95	95		DZK15_IMG_4275-4275.png	0.7122855	3383	59420	1423
96	96		DZK15_IMG_6498-3420.png	0.7433168	20882	30232	5533
97	97		DZK15_IMG_4104-12996.png	0.88491166	15624	45848	5
98	98		DZK15_IMG_3591-4275.png	0.8632535	30696	25115	3244
99	99		DZK15_IMG_2907-12825.png	0.827598	24290	31126	411
100	100		DZK15_IMG_2565-5643.png	0.7798455	2221	62061	826
101	101		DZK15_IMG_7011-5472.png	0.81794196	5425	57696	1872
102	102		DZK15_IMG_5301-3420.png	0.9010101	5798	58464	26
103	103		KBY15_IMG_11970-3762.png	0.9687684	3288	62036	84
104	104		DZK15_IMG_2565-11115.png	0.86349696	34362	20310	2724
105	105		DZK15_IMG_6156-3078.png	0.90732497	1121	64186	210
106	106		KBY15_IMG_30438-24111.png	0.9782909	6016	59253	227
107	107		DZK15_IMG_1539-12483.png	0.33881167	402	63565	89
108	108		KBY15_IMG_19836-16416.png	0.84968185	38720	13116	1216
109	109		KBY15_IMG_13680-22401.png	0.9775944	16471	48310	437

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative
110	110		DZK15_IMG_6156-1710.png	0.96306425	2816	62504	158
111	111		DZK15_IMG_4275-9918.png	0.6738436	14553	36895	276
112	112		KBY15_IMG_23085-9234.png	0.98517984	4055	61359	35
113	113		DZK15_IMG_2907-10944.png	0.9573293	11958	52512	488
114	114		DZK15_IMG_2907-3762.png	0.6727926	842	63875	20
115	115		DZK15_IMG_2394-11799.png	0.84922963	37178	15157	903
116	116		DZK15_IMG_2736-9747.png	0.95638466	2730	62557	11
117	117		DZK15_IMG_7353-6327.png	0.86265683	17634	42287	654
118	118		DZK15_IMG_5643-3933.png	0.8926404	18242	42906	0
119	119		DZK15_IMG_3591-9405.png	0.9335911	4829	60020	0
120	120		DZK15_IMG_1368-10602.png	0.85844636	24555	32883	259
121	121		DZK15_IMG_5472-4446.png	0.8897232	31518	26205	1476
122	122		DZK15_IMG_2565-5130.png	0.74367946	956	63921	6
123	123		KBY15_IMG_22743-9576.png	0.810556	6619	55823	712
124	124		DZK15_IMG_4104-9405.png	0.75156885	17126	37088	1184
125	125		KBY15_IMG_10773-3420.png	0.9057813	8758	54956	189
126	126		DZK15_IMG_8721-4446.png	0.94324064	5833	59001	7
127	127		KBY15_IMG_13680-20520.png	0.91799134	4360	60397	13
128	128		KBY15_IMG_20007-23598.png	0.9002959	37261	20022	2211
129	129		KBY15_IMG_10773-2907.png	0.7843032	23424	29228	4727
130	130		DZK15_IMG_5301-1368.png	0.5912409	10287	41025	1068
131	131		KBY15_IMG_7011-16245.png	0.95400864	3433	61772	190
132	132		DZK15_IMG_4788-4446.png	0.93924534	4120	60883	179
133	133		DZKN15_IMG_6840-4617.png	0.78600705	13998	43916	704
134	134		DZK15_IMG_5985-8550.png	0.9260732	36685	22994	1328
135	135		KBY15_IMG_7011-9918.png	0.8590916	25317	31914	2744
136	136		DZK15_IMG_4104-1710.png	0.97175384	15963	48645	471
137	137		DZK15_IMG_7353-6156.png	0.7584352	21287	30689	6974

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		id	png	Dice_score	True_Positive	True_Negative	False_Ne
138	138	138	DZK15_IMG_1881-6156.png	0.00038767201	4	44904	80
139	139	139	DZK15_IMG_6840-9063.png	0.6468085	152	65218	14
140	140	140	DZKN15_IMG_2565-6498.png	0.8689366	32334	23448	995
141	141	141	DZK15_IMG_7011-7353.png	0.94790494	5486	59447	9
142	142	142	DZK15_IMG_5472-3420.png	0.8744252	27857	29678	2751
143	143	143	DZK15_IMG_5814-5814.png	0.9777876	11005	54031	12
144	144	144	DZKN15_IMG_6840-2736.png	0.9267192	12722	50802	347
145	145	145	DZK15_IMG_6156-4446.png	0.5679565	1776	61058	65
146	146	146	DZKN15_IMG_2052-4275.png	nan	0	65530	2
147	147	147	KBY15_IMG_3591-14877.png	0.53880215	3225	56790	1001
148	148	148	DZK15_IMG_4275-2565.png	0.81731695	21607	34270	5918
149	149	149	DZKN15_IMG_1881-5472.png	0.71620804	3566	59144	64
150	150	150	KBY15_IMG_3078-16929.png	0.911109	28443	31543	1553
151	151	151	KBY15_IMG_3249-14706.png	0.8561368	1702	63262	173
152	152	152	DZK15_IMG_4617-10260.png	0.029721957	31	63481	18
153	153	153	DZK15_IMG_2394-4959.png	0.8525788	35920	17194	2804
154	154	154	KBY15_IMG_14877-3420.png	0.6728468	8855	48070	93
155	155	155	KBY15_IMG_23256-18468.png	0.9101731	1682	63522	48
156	156	156	DZK15_IMG_3249-11115.png	0.9677981	2780	62571	34
157	157	157	DZK15_IMG_3762-4959.png	0.9106098	545	64884	91
158	158	158	DZK15_IMG_5472-2907.png	0.87018913	1334	63804	236
159	159	159	KBY15_IMG_7353-16929.png	0.91472083	1802	63398	3
160	160	160	DZK15_IMG_3591-11799.png	0.86928505	30355	26052	5170
161	161	161	KBY15_IMG_6669-16587.png	0.9209717	17061	45547	2602
162	162	162	KBY15_IMG_19836-16074.png	0.39013746	894	61847	2793
163	163	163	DZK15_IMG_7524-3762.png	0.86958927	34554	20618	2203
164	164	164	DZKN15_IMG_8721-5130.png	0.7247278	28426	15516	1385
165	165	165	KBY15_IMG_14877-2394.png	0.8574147	28831	27116	2456

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative
166	166	KBY15_IMG_12996-7353.png	0.807662	6662	55701	248	
167	167	KBY15_IMG_14706-23085.png	0.9704566	3252	62086	167	
168	168	KBY15_IMG_28044-13167.png	0.87037367	39320	14504	1530	
169	169	DZK15_IMG_1881-7011.png	0.6163328	800	63740	0	
170	170	DZK15_IMG_3933-12654.png	0.9678628	3358	61955	94	
171	171	KBY15_IMG_17955-24453.png	0.88303024	35085	21156	1509	
172	172	DZKN15_IMG_6840-3933.png	0.32576802	1421	58233	1389	
173	173	DZK15_IMG_5643-11970.png	0.7578846	16581	38361	3389	
174	174	DZK15_IMG_7353-1710.png	0.85588616	13621	47328	876	
175	175	DZK15_IMG_4617-1710.png	0.6189377	268	64938	8	
176	176	KBY15_IMG_28215-22059.png	0.79274505	22619	31090	3745	
177	177	DZK15_IMG_6669-5814.png	0.62696	8237	47497	1198	
178	178	DZK15_IMG_5472-10944.png	0.9710902	1394	64059	12	
179	179	DZK15_IMG_6156-4104.png	0.85947144	34326	19985	1585	
180	180	KBY15_IMG_27018-15903.png	0.91705066	47163	9841	1978	
181	181	KBY15_IMG_15048-2736.png	0.89655167	104	65408	20	
182	182	KBY15_IMG_7695-10089.png	0.91425514	35005	23965	1554	
183	183	KBY15_IMG_12825-21546.png	0.2	1	65527	5	
184	184	KBY15_IMG_19665-15903.png	0.97716063	10204	54855	160	
185	185	DZK15_IMG_3762-9918.png	0.8894299	6210	57782	59	
186	186	DZKN15_IMG_1881-5814.png	0.93235815	7202	57289	467	
187	187	DZK15_IMG_5814-1368.png	0.75840276	7920	52570	191	
188	188	KBY15_IMG_10431-4617.png	0.61237115	891	63517	0	
189	189	KBY15_IMG_11286-4617.png	0.7064439	148	65265	24	
190	190	DZK15_IMG_3249-7866.png	0.88418406	33076	23795	3707	
191	191	DZK15_IMG_4788-9918.png	0.9545698	3551	61647	146	
192	192	DZK15_IMG_1710-4788.png	0.8912183	28269	30366	1210	
193	193	DZKN15_IMG_5130-3249.png	0.7280385	12100	44396	613	

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		id	png	Dice_score	True_Positive	True_Negative	False_Ne
194	194	194	KBY15_IMG_16416-4446.png	0.88101304	16071	45124	1582
195	195	195	DZK15_IMG_4959-1710.png	0.94406396	22329	40561	21
196	196	196	DZK15_IMG_4788-5643.png	0.9530829	3362	61843	131
197	197	197	DZK15_IMG_1710-2907.png	0.6677732	2414	60720	0
198	198	198	DZK15_IMG_5814-6840.png	0.92103577	5033	59640	8
199	199	199	DZK15_IMG_2907-10431.png	0.70504385	12958	41736	2358
200	200	200	KBY15_IMG_10602-3078.png	0.93862003	2095	63167	188
201	201	201	DZK15_IMG_2907-7182.png	0.9791139	8696	56469	68
202	202	202	DZK15_IMG_1881-5301.png	0.87066215	8317	54748	12
203	203	203	DZKN15_IMG_4788-3249.png	0.94441336	4222	60817	460
204	204	204	DZK15_IMG_3078-10089.png	0.40456587	1081	61273	711
205	205	205	DZKN15_IMG_7866-5301.png	0.8647333	31069	24747	1248
206	206	206	DZK15_IMG_3591-7353.png	0.8715228	35810	19168	1644
207	207	207	KBY15_IMG_27873-13167.png	0.93625367	7160	57401	81
208	208	208	DZK15_IMG_7524-4104.png	0.8641371	2824	61824	78
209	209	209	KBY15_IMG_28557-22914.png	0.9480227	6101	58766	0
210	210	210	DZK15_IMG_5643-9747.png	0.72025293	9682	48333	103
211	211	211	DZK15_IMG_3762-14022.png	0.95251876	5597	59381	49
212	212	212	DZK15_IMG_5814-3933.png	nan	0	65141	2
213	213	213	DZK15_IMG_6327-1881.png	0.9008499	36779	20661	2152
214	214	214	DZK15_IMG_2907-3933.png	0.88316786	4271	60135	447
215	215	215	KBY15_IMG_12825-21204.png	0.85570973	33350	20939	2960
216	216	216	DZKN15_IMG_855-6840.png	0.79886246	9832	50753	877
217	217	217	DZK15_IMG_4446-3078.png	0.89403695	1042	64247	190
218	218	218	KBY15_IMG_7182-16587.png	0.87747425	19705	40328	841
219	219	219	DZK15_IMG_4275-9234.png	0.9275518	1722	63545	4
220	220	220	DZK15_IMG_6327-2907.png	0.68970495	13851	39222	7665
221	221	221	KBY15_IMG_30267-12825.png	0.9168866	38567	19977	2309

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative
222	222		DZK15_IMG_2565-3762.png	0.7540347	14764	41140	1266
223	223		DZK15_IMG_7011-5985.png	0.86036545	31008	24463	1411
224	224		KBY15_IMG_10944-4959.png	0.78330123	8950	51634	683
225	225		DZK15_IMG_4446-4617.png	0.74796253	9958	48867	2727
226	226		KBY15_IMG_29241-23769.png	0.9731278	10194	54779	217
227	227		DZK15_IMG_3933-2052.png	0.80229485	27828	23993	1029
228	228		KBY15_IMG_15219-2052.png	0.9662182	4991	60196	19
229	229		KBY15_IMG_6840-16416.png	0.583915	2719	58942	2182
230	230		DZK15_IMG_5814-2394.png	0.93208027	9174	55025	959
231	231		DZK15_IMG_2052-7011.png	0.0012634239	1	63954	10
232	232		DZKN15_IMG_2736-6498.png	0.8647746	6734	56696	13
233	233		DZK15_IMG_4959-11628.png	0.96722114	1977	63425	24
234	234		KBY15_IMG_27873-12996.png	0.840727	4302	59604	23
235	235		DZK15_IMG_5985-6669.png	0.7904606	27212	23897	1845
236	236		KBY15_IMG_28728-11970.png	0.8847842	37076	18804	3744
237	237		DZK15_IMG_2052-3420.png	0.9685339	5602	59570	168
238	238		KBY15_IMG_29241-22914.png	0.4418786	3406	53526	1923
239	239		DZK15_IMG_2052-13338.png	0.91453797	34602	24467	2103
240	240		DZK15_IMG_1539-7524.png	0.9093335	6133	58180	997
241	241		DZK15_IMG_3591-13509.png	0.7641392	23759	27110	9584
242	242		DZK15_IMG_3762-10260.png	0.9173936	6047	58400	83
243	243		DZK15_IMG_5643-11115.png	0.968386	13677	50966	40
244	244		DZK15_IMG_4104-2052.png	0.98054117	17410	47435	421
245	245		DZK15_IMG_1881-12996.png	0.73352444	896	63989	273
246	246		KBY15_IMG_27702-11457.png	0.8599892	24689	32808	1453
247	247		DZK15_IMG_3078-9576.png	0.50877196	3480	55336	41
248	248		DZK15_IMG_3591-8379.png	0.89268583	20193	40488	1053
249	249		DZK15_IMG_2565-4788.png	0.95492893	16865	47079	71

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		id	png	Dice_score	True_Positive	True_Negative	False_Ne
250	250	DZK15_IMG_6840-7353.png	0.9346181	6547	58073	223	
251	251	KBY15_IMG_15732-2907.png	0.61520064	2829	59168	419	
252	252	DZKN15_IMG_7011-4104.png	0.94736844	999	64426	66	
253	253	DZKN15_IMG_5814-513.png	0.0001470264	1	51934	10365	
254	254	KBY15_IMG_2565-17613.png	0.9815421	11699	53397	342	
255	255	DZK15_IMG_7011-8721.png	0.9594206	16692	47432	679	
256	256	DZKN15_IMG_7695-3420.png	0.41322315	1275	60640	157	
257	257	DZK15_IMG_2565-10089.png	0.7601269	2036	62215	325	
258	258	DZK15_IMG_6327-7866.png	0.9661769	1414	64023	83	
259	259	DZKN15_IMG_4788-4959.png	0.8813607	37074	18481	3492	
260	260	DZK15_IMG_5301-1881.png	0.8060985	4124	59428	222	
261	261	KBY15_IMG_23769-19323.png	0.8380336	24991	30885	5366	
262	262	DZKN15_IMG_5301-684.png	0.724096	21695	27308	7458	
263	263	DZK15_IMG_3249-12825.png	0.8429055	4102	59905	855	
264	264	DZK15_IMG_4788-5814.png	0.87014025	2171	62717	11	
265	265	DZK15_IMG_4446-2736.png	0.7913531	7413	54214	65	
266	266	DZK15_IMG_7524-4275.png	0.82043743	13673	45878	743	
267	267	KBY15_IMG_14877-2565.png	0.98483443	10098	55127	66	
268	268	DZK15_IMG_2223-11628.png	0.879717	35190	20723	1392	
269	269	KBY15_IMG_15561-2565.png	0.6609403	2847	59768	17	
270	270	DZK15_IMG_4275-11286.png	0.9320843	597	64852	13	
271	271	DZK15_IMG_2223-14022.png	0.9275129	2879	62207	166	
272	272	KBY15_IMG_19836-22743.png	0.8299739	33023	18983	3579	
273	273	DZKN15_IMG_1710-5985.png	0.82000756	29255	23438	1981	
274	274	KBY15_IMG_2907-14706.png	0.6043567	6922	49551	17	
275	275	DZKN15_IMG_1710-4788.png	0.95002645	11663	52646	67	
276	276	DZK15_IMG_4959-12483.png	0.88207275	3796	60725	191	
277	277	DZK15_IMG_4617-9576.png	0.92174816	33777	26024	2148	

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative
278	278	KBY15_IMG_9405-5301.png	0.9342015	19515	43272	137	
279	279	DZKN15_IMG_5814-855.png	0.90215397	34889	23079	1011	
280	280	DZK15_IMG_5643-2052.png	0.7161299	5159	56287	3353	
281	281	DZK15_IMG_5130-11970.png	0.91573375	4499	60209	18	
282	282	DZK15_IMG_4446-5130.png	0.92264396	6721	57688	100	
283	283	DZKN15_IMG_5985-2907.png	0.9032258	224	65264	30	
284	284	KBY15_IMG_29070-11970.png	0.8551661	21383	36910	1004	
285	285	DZKN15_IMG_5985-1368.png	0.87800545	28173	29534	2290	
286	286	DZK15_IMG_1881-10944.png	0.88252884	6491	57317	480	
287	287	KBY15_IMG_29412-22914.png	0.7515954	4829	57515	0	
288	288	DZK15_IMG_6498-5643.png	0.9386963	1692	63623	116	
289	289	DZKN15_IMG_7011-4275.png	0.94007283	6714	57966	543	
290	290	DZK15_IMG_1881-13338.png	0.76575273	20289	32834	1966	
291	291	KBY15_IMG_7524-8550.png	0.7737747	29682	18498	907	
292	292	DZK15_IMG_2565-14193.png	0.5830104	8500	44877	6404	
293	293	KBY15_IMG_13851-22401.png	0.8869027	6301	57628	5	
294	294	DZK15_IMG_2736-9576.png	0.86178696	20969	37841	413	
295	295	DZK15_IMG_1539-10944.png	0.5592714	5711	50824	1711	
296	296	KBY15_IMG_17955-24624.png	0.8786059	33076	23320	2670	
297	297	DZKN15_IMG_6669-3420.png	0.8702615	32771	22994	656	
298	298	KBY15_IMG_14364-22743.png	0.88666934	33157	23903	834	
299	299	DZK15_IMG_4617-8721.png	0.6802042	8592	48865	112	
300	300	KBY15_IMG_30951-21717.png	0.96700996	8310	56659	274	
301	301	DZK15_IMG_2736-5130.png	0.91557217	244	65247	33	
302	302	KBY15_IMG_31806-22230.png	0.950173	5082	59921	449	
303	303	DZK15_IMG_7353-5301.png	0.8916494	37217	19274	912	
304	304	DZK15_IMG_7182-5130.png	0.9599486	15687	48540	234	
305	305	DZK15_IMG_2223-4275.png	0.806402	5769	56997	7	

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		id	png	Dice_score	True_Positive	True_Negative	False_Ne
306	306		DZK15_IMG_6840-3249.png	0.92400146	6304	58195	193
307	307		DZK15_IMG_9234-4446.png	0.5364172	9880	38579	9407
308	308		DZK15_IMG_2223-6669.png	0.95687777	7245	57638	158
309	309		KBY15_IMG_3933-13167.png	0.8788784	13979	47704	1385
310	310		KBY15_IMG_6669-9918.png	0.79798305	28644	22389	1695
311	311		DZKN15_IMG_8721-4788.png	0.79293305	24236	28642	2652
312	312		DZK15_IMG_8208-3078.png	0.91917473	10781	52859	22
313	313		DZK15_IMG_5472-9234.png	0.8794416	29044	28529	2720
314	314		KBY15_IMG_11970-4446.png	0.9589592	3575	61655	196
315	315		KBY15_IMG_16074-21717.png	0.94001514	619	64838	9
316	316		DZK15_IMG_5643-1710.png	0.9054292	6429	57764	1217
317	317		DZK15_IMG_5643-2736.png	0.85248005	33144	20921	1782
318	318		KBY15_IMG_15390-22743.png	0.93089104	46195	12482	2830
319	319		DZK15_IMG_4104-13680.png	0.83298594	26374	28586	3192
320	320		DZKN15_IMG_4617-4617.png	0.8013238	26392	26057	950
321	321		KBY15_IMG_3762-13509.png	0.93571997	19499	43358	783
322	322		DZK15_IMG_7695-5301.png	0.81819504	19606	37217	921
323	323		KBY15_IMG_14877-22572.png	0.949339	7683	57033	587
324	324		DZKN15_IMG_6156-1539.png	0.9417226	18462	44789	42
325	325		KBY15_IMG_3078-17613.png	0.88332325	8782	54434	895
326	326		KBY15_IMG_12654-21204.png	0.89682573	25173	34571	883
327	327		DZK15_IMG_6669-3420.png	0.95633966	4797	60301	319
328	328		DZK15_IMG_3249-10602.png	0.8904052	5220	59031	109
329	329		DZK15_IMG_5130-6840.png	0.4837333	907	62693	116
330	330		DZKN15_IMG_6840-5472.png	0.90266585	3640	61111	706
331	331		KBY15_IMG_10773-10773.png	0.78175443	25305	26102	1860
332	332		DZK15_IMG_4788-3933.png	0.24000001	3	65514	17
333	333		DZKN15_IMG_8892-5130.png	0.8099883	3114	60961	101

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative
334	334	KBY15_IMG_15390-2736.png	0.9250484	34397	25565	1890	
335	335	DZK15_IMG_4104-10602.png	0.85086626	33619	20132	838	
336	336	DZK15_IMG_3420-6327.png	0.841465	19437	38775	1100	
337	337	KBY15_IMG_7353-16074.png	0.8186074	1399	63517	4	
338	338	KBY15_IMG_9918-13338.png	0.8096694	35102	13931	3494	
339	339	DZK15_IMG_2736-7524.png	0.7810675	15446	41431	3710	
340	340	KBY15_IMG_13509-22572.png	0.6442799	7310	50154	1960	
341	341	KBY15_IMG_29241-12825.png	0.00030052592	1	58882	109	
342	342	DZK15_IMG_7011-5643.png	0.70465523	5979	54545	1381	
343	343	DZK15_IMG_6669-4104.png	0.8417645	14693	45319	613	
344	344	DZK15_IMG_5643-5814.png	0.9361302	35345	25368	957	
345	345	KBY15_IMG_9918-3762.png	0.9749425	8696	56393	323	
346	346	DZK15_IMG_6840-3762.png	0.38197145	1178	60546	74	
347	347	DZK15_IMG_1710-6498.png	0.91117835	35079	23618	1484	
348	348	DZK15_IMG_8379-2907.png	0.4375	1036	61836	0	
349	349	DZK15_IMG_7866-2223.png	0.8290909	3876	60062	159	
350	350	KBY15_IMG_7353-17100.png	0.76133764	31645	14051	13946	
351	351	DZKN15_IMG_0-6669.png	0.9882406	12984	52243	189	
352	352	KBY15_IMG_15048-3591.png	0.7913369	19694	35456	6303	
353	353	DZK15_IMG_4788-10773.png	0.8195149	31521	20131	362	
354	354	KBY15_IMG_28044-12312.png	0.9177693	10508	53145	231	
355	355	DZK15_IMG_3933-6840.png	0.9162593	7216	57001	64	
356	356	DZK15_IMG_3249-13680.png	0.8672199	209	65263	48	
357	357	DZK15_IMG_5472-9405.png	0.67453384	1429	62728	147	
358	358	KBY15_IMG_12825-21888.png	0.78844345	25134	26914	5717	
359	359	DZK15_IMG_4959-6156.png	0.9315032	7058	57440	675	
360	360	DZK15_IMG_4788-7182.png	0.58203375	4124	55489	372	
361	361	DZK15_IMG_2052-12654.png	0.6824742	16953	32808	8667	

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		id	png	Dice_score	True_Positive	True_Negative	False_Ne
362	362	362	DZKN15_IMG_1197-5814.png	0.23156682	402	62466	0
363	363	363	DZK15_IMG_1710-13338.png	0.8947369	374	65074	31
364	364	364	DZKN15_IMG_855-7011.png	nan	0	65362	171
365	365	365	KBY15_IMG_30438-23940.png	0.459854	63	65325	129
366	366	366	DZKN15_IMG_5814-1881.png	0.93355775	6653	57936	265
367	367	367	DZK15_IMG_2736-9918.png	0.5086749	8737	39921	496
368	368	368	DZK15_IMG_1368-9918.png	0.96351266	3895	61346	191
369	369	369	DZK15_IMG_4959-11457.png	0.85142714	3341	61029	29
370	370	370	DZK15_IMG_3762-6669.png	0.88866484	9255	53962	590
371	371	371	DZK15_IMG_4959-8892.png	0.84299564	2043	62732	505
372	372	372	DZK15_IMG_8208-6327.png	0.755167	1425	63187	76
373	373	373	DZKN15_IMG_4788-4104.png	0.9222659	5161	59505	111
374	374	374	DZKN15_IMG_7182-4104.png	0.08340117	461	54942	1190
375	375	375	DZKN15_IMG_5814-1710.png	0.96788263	2441	62933	135
376	376	376	KBY15_IMG_29070-12483.png	0.6376811	880	63656	331
377	377	377	KBY15_IMG_17955-25650.png	0.8318019	17200	41380	796
378	378	378	DZK15_IMG_6327-6327.png	0.87610424	37340	17635	1016
379	379	379	DZK15_IMG_6327-5472.png	0.79845554	26882	25083	3252
380	380	380	KBY15_IMG_20349-15561.png	0.9627275	4391	60805	293
381	381	381	DZK15_IMG_8379-1026.png	0.86312735	31874	23553	2681
382	382	382	DZKN15_IMG_2223-6156.png	0.9411043	4602	60358	228
383	383	383	DZK15_IMG_4959-8379.png	0.81256866	4810	58507	303
384	384	384	DZK15_IMG_2052-4275.png	0.92822456	27048	34305	774
385	385	385	DZK15_IMG_1710-12312.png	0.8875	2840	61976	347
386	386	386	DZK15_IMG_6498-7524.png	0.91731876	41616	16418	1616
387	387	387	DZK15_IMG_5643-11799.png	0.9423957	6593	58137	239
388	388	388	DZK15_IMG_3249-3591.png	nan	0	65510	23
389	389	389	DZK15_IMG_3591-11286.png	0.6648859	6845	51791	3504

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative
390	390	KBY15_IMG_12825-10602.png	0.83284175	30639	22598	6997	
391	391	DZKN15_IMG_5985-4617.png	0.9451291	22125	40842	86	
392	392	DZK15_IMG_3933-13851.png	0.9542347	7329	57504	410	
393	393	DZK15_IMG_3420-13167.png	0.42102197	1446	60113	42	
394	394	KBY15_IMG_14364-3420.png	0.93126583	6456	58127	181	
395	395	DZKN15_IMG_5814-2907.png	0.41837963	519	63574	1241	
396	396	KBY15_IMG_29070-12996.png	0.9413194	2711	62487	42	
397	397	DZK15_IMG_3762-4617.png	0.76923084	35	65480	18	
398	398	KBY15_IMG_7524-9063.png	0.9505167	13936	50149	226	
399	399	DZK15_IMG_2565-13680.png	0.7596382	23349	27411	9093	
400	400	KBY15_IMG_32490-23256.png	0.97457623	460	65052	18	
401	401	DZKN15_IMG_7695-4788.png	0.6671974	2514	60514	596	
402	402	DZK15_IMG_3591-6498.png	0.8282996	28385	25383	2520	
403	403	DZK15_IMG_4617-4446.png	0.277666	207	64252	1075	
404	404	DZK15_IMG_5814-8892.png	0.8794929	36349	19226	2179	
405	405	DZKN15_IMG_7524-3591.png	0.79573506	16083	41196	1941	
406	406	KBY15_IMG_28386-22059.png	0.60046345	12048	37455	4762	
407	407	KBY15_IMG_22914-9405.png	0.7479798	18606	34392	5903	
408	408	DZKN15_IMG_8892-4788.png	0.22884966	188	64081	531	
409	409	KBY15_IMG_27360-27189.png	0.87723404	36028	19424	2324	
410	410	KBY15_IMG_31977-22230.png	0.8902128	4184	60320	185	
411	411	DZK15_IMG_5130-5130.png	0.78594774	17316	38788	3077	
412	412	DZK15_IMG_7182-4788.png	0.94257003	14960	48753	146	
413	413	KBY15_IMG_24624-17955.png	0.9053472	35835	22208	1391	
414	414	KBY15_IMG_13338-21888.png	0.80098176	3916	59674	1	
415	415	KBY15_IMG_12996-21375.png	0.92545956	7828	56447	319	
416	416	DZKN15_IMG_4617-5472.png	0.9182329	14290	48701	66	
417	417	DZK15_IMG_7011-7695.png	0.87229943	29212	27771	1254	

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		id	png	Dice_score	True_Positive	True_Negative	False_Ne
418	418	DZK15_IMG_4959-8550.png	0.82266915	25258	29389	1279	
419	419	DZKN15_IMG_6498-3762.png	0.8994429	16467	45387	44	
420	420	DZK15_IMG_1710-7866.png	0.96495616	771	64709	37	
421	421	KBY15_IMG_28728-11457.png	0.8193585	24718	29919	84	
422	422	KBY15_IMG_12483-21033.png	0.9309766	4714	60123	55	
423	423	DZKN15_IMG_6840-5814.png	0.8108447	29115	22837	4994	
424	424	DZK15_IMG_1881-7353.png	0.92253983	2114	63067	341	
425	425	KBY15_IMG_11115-10773.png	0.8964507	6731	57250	713	
426	426	DZK15_IMG_4446-12825.png	0.14764267	119	64043	679	
427	427	KBY15_IMG_11115-4446.png	0.966498	19675	44497	1024	
428	428	DZK15_IMG_7524-1026.png	0.9335148	20921	41635	1093	
429	429	DZK15_IMG_6327-4788.png	0.8468607	18202	40751	645	
430	430	KBY15_IMG_7866-16758.png	0.0021953897	1	64626	1	
431	431	DZK15_IMG_3420-2223.png	0.8843915	4632	59693	41	
432	432	DZK15_IMG_2052-8721.png	0.9662748	6905	58149	28	
433	433	DZKN15_IMG_6327-3591.png	0.8195429	7171	55207	61	
434	434	DZK15_IMG_5301-7524.png	0.8713172	30639	25847	5638	

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[All dataset] EfficientNet B1 U-Net (OCC transferred-untrained)

	id	png	Dice_score	True_Positive	True_Negative	False_Negative
0	0	DZKN15_IMG_6669-3249.png	0.74003804	585	64540	277
1	1	KBY15_IMG_28215-22059.png	nan	0	64631	719
2	2	DZK15_IMG_3420-5814.png	0.2420601	282	63488	1691
3	3	KBY15_IMG_8037-16416.png	0.056694284	130	61080	4096
4	4	KBY15_IMG_29241-22914.png	0.6329499	6658	51156	7052
5	5	KBY15_IMG_29925-23256.png	0.47534436	7919	40136	16883
6	6	DZK15_IMG_7524-4104.png	0.17104968	3444	28711	32833
7	7	DZK15_IMG_3591-7353.png	0.8278866	10931	50060	3509
8	8	DZKN15_IMG_5985-3762.png	0.4488721	1960	58763	4309
9	9	DZK15_IMG_6327-6327.png	0.20165351	4305	27144	33824
10	10	DZK15_IMG_7011-5985.png	0.17907086	3656	28359	33430
11	11	KBY15_IMG_7524-17271.png	0.23742868	4495	32167	28658
12	12	KBY15_IMG_28728-11457.png	0.30597442	6645	28746	29642
13	13	KBY15_IMG_3933-13509.png	0.5317565	7824	43933	11332
14	14	KBY15_IMG_20178-22914.png	0.8574486	4006	60198	1211
15	15	DZK15_IMG_7524-5985.png	0.7695968	3073	60623	1645
16	16	KBY15_IMG_15732-2907.png	0.4200781	4787	47532	12257
17	17	DZK15_IMG_3591-9918.png	0.092801265	943	46156	18344
18	18	KBY15_IMG_16074-21717.png	0.68114203	4533	56759	4171
19	19	KBY15_IMG_12483-21033.png	0.940528	3242	61884	381
20	20	DZKN15_IMG_7182-4104.png	0.39513108	1477	59537	2153
21	21	KBY15_IMG_12825-21204.png	0.79778695	4326	59017	2189
22	22	DZKN15_IMG_1881-5472.png	0.8927109	545	64860	83
23	23	DZK15_IMG_1710-12312.png	0.27594727	5138	33435	25767
24	24	DZK15_IMG_8037-4104.png	0.38625592	1793	58045	5178
25	25	DZKN15_IMG_8721-5130.png	0.9715684	16676	47884	260

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		id	png	Dice_score	True_Positive	True_Negative	False_Ne
26	26		DZK15_IMG_1710-13338.png	0.64778	3487	58257	3643
27	27		DZK15_IMG_1881-7353.png	0.3836233	6648	37525	20694
28	28		DZK15_IMG_4275-2565.png	0.3629992	3004	51989	9709
29	29		DZK15_IMG_4104-2052.png	0.18463995	3355	32550	29620
30	30		DZKN15_IMG_4788-4959.png	0.9297568	11317	52509	413
31	31		DZK15_IMG_2736-9747.png	0.6278175	9874	43955	11508
32	32		KBY15_IMG_14877-22743.png	0.0018682859	2	63397	0
33	33		DZKN15_IMG_4617-5643.png	0.2733224	167	64481	443
34	34		KBY15_IMG_11970-3762.png	0.9711801	4802	60449	27
35	35		KBY15_IMG_9747-4104.png	0.049760204	1105	22228	42127
36	36		DZKN15_IMG_6840-3933.png	0.3061901	5127	37174	23134
37	37		DZK15_IMG_1197-9918.png	0.94630617	2485	62769	268
38	38		KBY15_IMG_19836-22743.png	0.19131288	3898	28684	32807
39	39		KBY15_IMG_19836-16416.png	0.5646406	3256	57259	5014
40	40		KBY15_IMG_7353-17100.png	0.89264053	6107	57960	1134
41	41		KBY15_IMG_20007-23598.png	0.8514608	7621	55256	2224
42	42		DZK15_IMG_6327-2907.png	0.8216165	11243	49411	4386
43	43		KBY15_IMG_10602-3078.png	0.2778917	5963	28583	30619
44	44		DZK15_IMG_2907-7182.png	0.5531915	143	65162	134
45	45		DZK15_IMG_6156-1710.png	0.13021196	2617	27957	34837
46	46		KBY15_IMG_27873-13167.png	0.40824917	1455	59863	2066
47	47		DZKN15_IMG_6156-1539.png	0.7930405	2826	61235	1473
48	48		KBY15_IMG_9918-3762.png	0.5812686	3519	56947	5070
49	49		KBY15_IMG_3078-14535.png	0.7787963	977	64004	277
50	50		DZK15_IMG_1539-12483.png	0.3087434	6485	30012	28916
51	51		KBY15_IMG_17955-25650.png	0.18495643	3788	28363	32112
52	52		DZK15_IMG_1710-2907.png	0.7060919	8722	49553	6642
53	53		DZKN15_IMG_1197-5814.png	0.8942731	1015	64281	21

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative
54	54		DZK15_IMG_2394-10431.png	0.22506805	4051	33589	27713
55	55		DZK15_IMG_4959-8892.png	0.08787346	1750	27456	36263
56	56		KBY15_IMG_14535-22914.png	0.18456134	1156	54165	9800
57	57		DZK15_IMG_8208-6327.png	0.67780095	2435	60786	1651
58	58		DZKN15_IMG_1881-5814.png	0.8347024	5792	57450	1947
59	59		DZK15_IMG_6840-3762.png	0.25339583	5326	28825	30984
60	60		DZK15_IMG_4617-8721.png	0.9426148	1889	63417	196
61	61		DZKN15_IMG_4788-4104.png	0.95765936	4026	61154	347
62	62		DZK15_IMG_4788-4446.png	0.7259713	1775	62421	1257
63	63		KBY15_IMG_3249-14706.png	0.9873636	4024	61409	66
64	64		DZK15_IMG_3933-12654.png	0.9781919	9868	55228	296
65	65		KBY15_IMG_3078-16929.png	0.17707779	1664	48406	14366
66	66		KBY15_IMG_6669-9918.png	0.024691358	18	64096	2
67	67		KBY15_IMG_14877-2565.png	0.43652344	447	63935	764
68	68		DZK15_IMG_2223-6669.png	0.581383	8719	44261	11980
69	69		KBY15_IMG_27702-11457.png	0.38470867	4916	44895	15621
70	70		DZK15_IMG_3249-11115.png	0.67468256	12962	40074	12234
71	71		DZK15_IMG_6498-7524.png	0.82608694	2052	62620	762
72	72		KBY15_IMG_30438-24111.png	0.17868146	3190	33020	29229
73	73		DZK15_IMG_2223-11628.png	0.26466396	5383	30241	29543
74	74		KBY15_IMG_27018-15903.png	0.011532427	158	38293	27007
75	75		KBY15_IMG_28728-11970.png	0.81531376	12043	48037	5328
76	76		DZK15_IMG_6669-3420.png	0.26365316	3068	45331	16902
77	77		DZK15_IMG_3078-10089.png	0.25115752	2658	47028	12658
78	78		KBY15_IMG_27360-27189.png	0.22998539	4796	28625	31987
79	79		KBY15_IMG_10944-4959.png	0.96539164	2385	62980	29
80	80		DZK15_IMG_2736-7524.png	0.14377783	2454	33854	29116
81	81		DZKN15_IMG_2565-6498.png	0.8919405	2728	62147	660

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		id	png	Dice_score	True_Positive	True_Negative	False_Ne
82	82		KBY15_IMG_29070-12996.png	0.9637357	5820	59278	423
83	83		DZK15_IMG_7011-5472.png	0.7635562	1211	63575	750
84	84		DZK15_IMG_4959-8379.png	0.88002515	1401	63753	276
85	85		KBY15_IMG_3762-13509.png	nan	0	64489	23
86	86		KBY15_IMG_10602-3762.png	0.19714865	3063	37526	24462
87	87		DZK15_IMG_4788-5643.png	0.2964824	59	65197	65
88	88		KBY15_IMG_15048-2736.png	0.74937606	4204	58520	2293
89	89		DZK15_IMG_5814-2394.png	0.22643994	4647	29139	31655
90	90		DZK15_IMG_3591-6156.png	0.77322686	1548	63080	907
91	91		DZK15_IMG_3249-10602.png	0.3370868	464	63247	1819
92	92		KBY15_IMG_12825-21888.png	0.2602944	3050	45151	17232
93	93		DZKN15_IMG_6840-5814.png	0.73121077	3089	60176	2024
94	94		KBY15_IMG_22914-9405.png	0.15758526	2613	34986	27726
95	95		DZK15_IMG_4446-12825.png	0.6779089	402	64752	0
96	96		KBY15_IMG_7011-16245.png	0.40676984	7030	38001	19385
97	97		KBY15_IMG_12996-7353.png	0.10770028	935	49108	13969
98	98		DZKN15_IMG_0-6669.png	0.30817217	988	60112	4284
99	99		DZK15_IMG_2736-9576.png	0.5764822	880	63363	696
100	100		DZK15_IMG_5643-9747.png	0.3304714	1020	60383	412
101	101		DZK15_IMG_4788-7182.png	0.81875676	4208	59465	1664
102	102		KBY15_IMG_7524-8550.png	0.4180197	1313	60567	3644
103	103		DZK15_IMG_7695-5301.png	0.2073511	2973	39833	21585
104	104		DZKN15_IMG_4788-3249.png	0.24281149	114	64711	522
105	105		KBY15_IMG_16416-4446.png	0.8234579	2710	61664	1061
106	106		DZK15_IMG_5130-11970.png	0.24973767	6425	20507	38188
107	107		DZKN15_IMG_7182-4275.png	0.8095808	2028	62554	946
108	108		DZKN15_IMG_855-7011.png	0.16998774	3327	29719	32419
109	109		DZKN15_IMG_6327-3591.png	0.9372149	4829	60060	0

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative
110	110	KBY15_IMG_9918-13338.png	0.2102545	3949	31921	29380	
111	111	DZK15_IMG_7182-4788.png	0.26618674	5916	27002	32440	
112	112	DZK15_IMG_2565-10089.png	0.86962664	11693	50337	2804	
113	113	DZKN15_IMG_5814-513.png	0.90545297	4118	60558	651	
114	114	DZK15_IMG_7011-7353.png	0.525665	6887	46220	12014	
115	115	KBY15_IMG_13680-22401.png	0.69743186	12574	42052	10480	
116	116	DZKN15_IMG_5985-4617.png	0.23888926	1755	52598	11018	
117	117	DZK15_IMG_2223-11457.png	0.16177794	2788	33857	28063	
118	118	DZK15_IMG_5814-3933.png	0.32717678	1302	58879	3739	
119	119	DZK15_IMG_5985-8550.png	0.46330556	9378	34431	21211	
120	120	DZK15_IMG_4788-5814.png	0.45335317	5479	46844	12809	
121	121	DZK15_IMG_4788-11628.png	0.51132685	79	65306	113	
122	122	KBY15_IMG_15048-3591.png	0.5107736	1446	61320	1973	
123	123	DZK15_IMG_3762-6669.png	0.9189189	2244	62896	332	
124	124	DZKN15_IMG_7011-4104.png	0.0104620755	6	64395	1017	
125	125	DZK15_IMG_3591-11799.png	nan	0	65333	110	
126	126	DZK15_IMG_4959-11457.png	0.40099132	4045	49406	8640	
127	127	DZK15_IMG_1881-5301.png	0.9180534	13130	50062	2176	
128	128	DZK15_IMG_3420-8892.png	0.9410487	4765	60174	511	
129	129	DZK15_IMG_7524-3249.png	0.9450915	3124	62049	328	
130	130	DZK15_IMG_8379-2907.png	0.023640318	489	24655	40387	
131	131	KBY15_IMG_19836-15903.png	0.25421047	5698	26405	33233	
132	132	KBY15_IMG_19836-15732.png	0.89547795	11129	51809	1940	
133	133	DZK15_IMG_5643-1710.png	0.8790715	1174	64039	323	
134	134	KBY15_IMG_27873-12996.png	0.30257618	5068	37105	23083	
135	135	KBY15_IMG_29412-22914.png	0.89356405	7539	56201	1480	
136	136	DZK15_IMG_1881-13338.png	0.20734322	4306	28307	32580	
137	137	DZKN15_IMG_6156-4104.png	0.24595186	281	63532	1619	

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		id	png	Dice_score	True_Positive	True_Negative	False_Ne
138	138		DZK15_IMG_4788-3933.png	0.49299443	7002	44132	13544
139	139		DZK15_IMG_6840-4617.png	0.8864382	12700	49582	2406
140	140		DZK15_IMG_6840-3078.png	nan	0	65519	0
141	141		KBY15_IMG_6669-16587.png	0.8364406	10072	51525	3645
142	142		DZK15_IMG_1539-10944.png	0.80125993	8013	53548	2790
143	143		DZKN15_IMG_6669-3420.png	0.39072168	9374	26927	28978
144	144		KBY15_IMG_28044-13167.png	0.093464725	1418	36611	27439
145	145		DZK15_IMG_1368-10602.png	0.7368421	217	65164	59
146	146		DZK15_IMG_3249-12825.png	0.9926715	6705	58732	42
147	147		DZK15_IMG_5301-1881.png	0.9729163	2784	62597	118
148	148		KBY15_IMG_30780-24282.png	0.87262344	4429	59814	900
149	149		DZK15_IMG_7353-1710.png	0.2115208	4377	28527	32182
150	150		DZK15_IMG_4788-9918.png	0.42534584	2383	56714	4897
151	151		KBY15_IMG_29583-12483.png	0.59888035	3958	56276	5275
152	152		DZK15_IMG_2736-10260.png	0.7662186	7240	53878	3401
153	153		KBY15_IMG_19665-15903.png	0.9270846	3808	61129	561
154	154		DZK15_IMG_3591-4275.png	0.44965047	5950	45021	14443
155	155		DZKN15_IMG_4617-4617.png	0.89405113	8852	54586	1857
156	156		DZK15_IMG_6498-3420.png	0.58555585	3458	57183	4211
157	157		DZK15_IMG_5985-10773.png	0.21105118	3619	34860	26847
158	158		DZK15_IMG_5643-3933.png	0.003210273	4	63048	1997
159	159		DZK15_IMG_2223-2736.png	0.7527082	4447	58167	2917
160	160		DZK15_IMG_3762-4959.png	0.81115836	4856	58419	2077
161	161		KBY15_IMG_29241-23769.png	0.26549026	4002	39390	21995
162	162		DZK15_IMG_1881-12996.png	0.6028499	10048	42249	12339
163	163		DZK15_IMG_3762-7182.png	0.12241224	68	64493	40
164	164		KBY15_IMG_13680-20520.png	0.36330634	5204	42092	17007
165	165		DZK15_IMG_2907-12825.png	0.07533167	1482	27672	36154

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative
166	166	KBY15_IMG_7524-9405.png	0.27022657	167	64467	893	
167	167	KBY15_IMG_30951-21717.png	0.8633784	9811	52620	2213	
168	168	DZK15_IMG_6327-1881.png	0.20642608	4645	25177	34827	
169	169	DZK15_IMG_3249-13509.png	0.691594	2497	60812	2185	
170	170	DZK15_IMG_2394-11799.png	0.098881364	1790	31121	32319	
171	171	DZK15_IMG_2907-3933.png	0.40068686	6884	38059	20242	
172	172	DZK15_IMG_2736-11286.png	0.22112545	2397	46253	15913	
173	173	KBY15_IMG_10773-2907.png	0.85228616	3234	61181	1112	
174	174	KBY15_IMG_20349-15561.png	0.9831032	8582	56659	182	
175	175	DZK15_IMG_2565-11115.png	nan	0	63827	1651	
176	176	DZK15_IMG_4104-12996.png	0.3180981	950	60513	4073	
177	177	DZKN15_IMG_7695-3420.png	0.107983924	1598	37537	26273	
178	178	DZK15_IMG_1368-6327.png	0.21958455	3626	36136	25569	
179	179	DZK15_IMG_1539-7524.png	0.24658579	4857	30999	28137	
180	180	KBY15_IMG_15561-2565.png	0.95770067	7064	57848	414	
181	181	DZKN15_IMG_8379-4959.png	0.25603768	1304	56654	6118	
182	182	DZK15_IMG_5130-6840.png	0.77734375	199	65223	55	
183	183	DZK15_IMG_5814-3078.png	0.9064081	16309	45859	3354	
184	184	DZKN15_IMG_1710-4788.png	0.8957856	5282	59025	1148	
185	185	DZK15_IMG_3933-13851.png	0.9045496	12476	50427	2226	
186	186	DZKN15_IMG_5814-2907.png	0.8070788	3238	60750	1279	
187	187	DZK15_IMG_7011-5643.png	0.64200187	5978	52891	6468	
188	188	KBY15_IMG_14364-22743.png	0.5966762	1472	62074	1900	
189	189	KBY15_IMG_19836-16074.png	0.08414832	1794	24691	39026	
190	190	DZK15_IMG_7695-2907.png	0.52271914	2922	57278	4438	
191	191	KBY15_IMG_7695-10089.png	0.8220661	2809	61511	55	
192	192	DZK15_IMG_3591-6498.png	0.8501969	2483	62178	474	
193	193	DZKN15_IMG_5814-4788.png	0.8241407	3489	60558	836	

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		id	png	Dice_score	True_Positive	True_Negative	False_Ne
194	194	194	KBY15_IMG_14877-2394.png	0.31532148	922	60610	1553
195	195	195	DZK15_IMG_2736-14022.png	0.061724234	1191	28136	35372
196	196	196	KBY15_IMG_28044-12312.png	0.570064	7221	47423	10775
197	197	197	DZK15_IMG_4275-4275.png	0.9330406	2975	62134	395
198	198	198	DZK15_IMG_2907-3762.png	0.23828083	4341	33441	27542
199	199	199	KBY15_IMG_10773-3420.png	0.88430345	17721	43178	4629
200	200	200	DZK15_IMG_6156-4104.png	0.9292709	2135	63076	47
201	201	201	KBY15_IMG_12996-21375.png	0.9194346	1301	64007	187
202	202	202	DZKN15_IMG_8550-4275.png	0.738926	1493	62988	1055
203	203	203	DZK15_IMG_5643-11799.png	0.35571688	196	64630	399
204	204	204	DZK15_IMG_2052-13338.png	0.30958623	3898	44252	17348
205	205	205	DZKN15_IMG_8721-4788.png	0.66438675	5731	54015	5624
206	206	206	DZK15_IMG_3762-9918.png	0.8034188	2444	61896	1049
207	207	207	KBY15_IMG_29070-11970.png	0.5423243	9277	40601	15424
208	208	208	DZK15_IMG_7695-3762.png	0.047267355	48	63553	1793
209	209	209	DZK15_IMG_2394-4959.png	0.5448718	170	65082	87
210	210	210	DZK15_IMG_3420-12312.png	0.8441885	4692	59112	1409
211	211	211	KBY15_IMG_23085-9234.png	0.009661836	4	64712	2
212	212	212	DZK15_IMG_3933-6840.png	0.1588022	3219	28214	33375
213	213	213	DZK15_IMG_6669-5814.png	0.58972013	2897	58608	4021
214	214	214	KBY15_IMG_11115-10773.png	nan	0	65415	11
215	215	215	DZK15_IMG_4104-9405.png	0.60717076	7773	47705	10058
216	216	216	DZK15_IMG_5472-3420.png	0.17694952	3988	24449	36862
217	217	217	KBY15_IMG_11286-4617.png	0.4390087	2055	58229	5168
218	218	218	DZK15_IMG_3249-3591.png	nan	0	64124	1232
219	219	219	DZK15_IMG_5301-7524.png	0.20057034	3798	31462	30142
220	220	220	DZK15_IMG_2052-3420.png	0.1767045	2133	43527	19718
221	221	221	DZKN15_IMG_5814-1710.png	0.5932434	1958	60893	2538

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				Dice_score	True_Positive	True_Negative	False_Negative
222	222	DZKN15_IMG_6840-5472.png		0.37933862	1388	59606	3418
223	223	DZK15_IMG_5643-11970.png		0.76634115	7181	53976	3848
224	224	DZK15_IMG_5130-11457.png		0.13269101	2355	32395	30079
225	225	DZK15_IMG_1881-6156.png		0.20712166	3490	35326	23600
226	226	KBY15_IMG_10431-4617.png		nan	0	61430	2867
227	227	KBY15_IMG_23256-18810.png		0.9286157	5997	58617	133
228	228	KBY15_IMG_7182-9918.png		0.97623855	12572	52352	601
229	229	DZK15_IMG_4617-9576.png		0.4771428	167	65003	324
230	230	DZK15_IMG_5472-10944.png		0.9182285	4385	60370	414
231	231	DZK15_IMG_6327-4788.png		0.010862945	107	45943	19044
232	232	KBY15_IMG_32490-23256.png		0.24504738	569	61461	417
233	233	KBY15_IMG_28557-22914.png		0.7347253	5261	56476	3686
234	234	DZK15_IMG_1881-7011.png		0.21343188	1473	53206	9465
235	235	DZKN15_IMG_6498-3762.png		0.20786469	4731	24747	35835
236	236	DZK15_IMG_3420-6327.png		0.42619815	8248	35079	21631
237	237	DZKN15_IMG_7866-5301.png		0.8468987	12070	49102	4364
238	238	DZK15_IMG_3420-2223.png		0.18270367	3095	34751	27579
239	239	KBY15_IMG_7524-9063.png		0.9808772	6899	58368	40
240	240	KBY15_IMG_7353-16074.png		0.15541446	3011	29799	32514
241	241	DZKN15_IMG_5301-684.png		nan	0	65450	20
242	242	DZK15_IMG_7524-1026.png		0.35148546	6306	35960	23173
243	243	DZK15_IMG_2565-4788.png		0.063506	868	39068	25496
244	244	DZK15_IMG_1197-8208.png		0.7146287	8334	50546	6457
245	245	DZK15_IMG_5301-2394.png		0.04511278	9	65146	162
246	246	DZK15_IMG_1881-10944.png		0.8950722	4986	59381	660
247	247	DZK15_IMG_3420-13167.png		0.48757958	2375	58169	4446
248	248	DZK15_IMG_5643-5814.png		0.1053665	161	62641	2662
249	249	KBY15_IMG_23256-18468.png		0.9503877	6312	58565	598

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		id	png	Dice_score	True_Positive	True_Negative	False_Ne
250	250	DZK15_IMG_4446-7182.png	0.7971621	12753	46293	5751	
251	251	KBY15_IMG_14706-23085.png	0.8367401	3152	61154	14	
252	252	DZK15_IMG_5130-5130.png	0.058020476	17	64967	16	
253	253	DZK15_IMG_2565-13680.png	0.90155435	870	64476	21	
254	254	KBY15_IMG_15219-2052.png	0.39126083	8802	29345	27123	
255	255	DZK15_IMG_2565-5130.png	0.6272054	3555	57755	4178	
256	256	DZKN15_IMG_855-6840.png	0.7350478	6188	54887	4223	
257	257	DZK15_IMG_6156-4446.png	0.9713959	3396	61940	157	
258	258	DZK15_IMG_4617-5301.png	nan	0	64689	4	
259	259	DZK15_IMG_3420-3249.png	0.88452834	7235	56412	1882	
260	260	DZK15_IMG_4446-5130.png	0.35465834	7484	30816	26652	
261	261	DZK15_IMG_5814-1368.png	0.2211097	3732	35511	26079	
262	262	KBY15_IMG_7011-10431.png	0.35667437	5710	39228	20432	
263	263	KBY15_IMG_12825-21546.png	0.20733704	3863	32136	29480	
264	264	DZK15_IMG_4446-2736.png	0.056697637	1248	22761	41446	
265	265	DZKN15_IMG_5985-1368.png	0.38568026	8177	31310	25250	
266	266	DZK15_IMG_8721-4446.png	0.24716772	3938	37609	23884	
267	267	DZK15_IMG_8208-3078.png	0.73152345	5726	55607	4059	
268	268	KBY15_IMG_14877-22572.png	0.70643055	2274	61372	773	
269	269	KBY15_IMG_22743-9576.png	0.25173643	5364	28284	31862	
270	270	DZK15_IMG_2052-12654.png	0.89980537	6704	57339	1443	
271	271	DZK15_IMG_5472-9234.png	0.37701282	5783	40641	18726	
272	272	DZK15_IMG_1710-6498.png	0.89779687	1467	63735	259	
273	273	DZK15_IMG_6156-3078.png	0.17916675	4853	16216	44172	
274	274	DZK15_IMG_7182-5130.png	0.74088013	4722	57511	2609	
275	275	KBY15_IMG_12483-21717.png	0.48350266	3451	54712	5160	
276	276	DZK15_IMG_2736-5130.png	0.17748432	3239	32276	29990	
277	277	DZK15_IMG_5301-1368.png	0.7304819	3373	59674	973	

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative
278	278		DZK15_IMG_7524-4275.png	nan	0	52773	10366
279	279		KBY15_IMG_12654-21204.png	0.15946501	775	56591	1017
280	280		KBY15_IMG_10773-10773.png	0.69720614	11841	43410	10173
281	281		DZK15_IMG_6840-9063.png	0.7591043	1678	62793	1063
282	282		DZK15_IMG_3420-8721.png	0.71808445	8142	51001	6274
283	283		DZK15_IMG_2565-14193.png	0.7548525	3364	59987	2167
284	284		DZK15_IMG_5814-6840.png	0.29575717	5364	34627	24622
285	285		DZK15_IMG_4788-11115.png	0.0557053	93	62290	3017
286	286		DZK15_IMG_4788-8721.png	0.9037705	3907	60797	10
287	287		DZKN15_IMG_5130-3249.png	0.59497446	7281	48342	9529
288	288		KBY15_IMG_17955-24453.png	0.2337405	4009	35242	26125
289	289		KBY15_IMG_3591-14877.png	0.38713956	4961	44868	15566
290	290		DZK15_IMG_3933-2052.png	0.5075662	805	63169	477
291	291		DZK15_IMG_6840-7353.png	0.7474231	4387	58184	2870
292	292		KBY15_IMG_12825-7695.png	0.3037989	5270	36112	23330
293	293		DZK15_IMG_5814-5814.png	0.07195442	562	50477	14217
294	294		KBY15_IMG_7353-16929.png	0.20082173	4179	28096	32578
295	295		DZKN15_IMG_5814-1881.png	0.8795147	1595	63504	135
296	296		KBY15_IMG_3933-13167.png	0.91384965	6407	57921	1027
297	297		KBY15_IMG_13338-21888.png	0.6232209	3744	57265	4367
298	298		DZK15_IMG_2223-14022.png	0.90698916	9298	54331	1704
299	299		DZK15_IMG_7011-7695.png	0.33272395	364	63712	1396
300	300		DZK15_IMG_4104-13680.png	0.019562181	21	63410	777
301	301		KBY15_IMG_14364-3420.png	0.9044846	1553	63655	322
302	302		KBY15_IMG_23769-19323.png	0.09264829	2218	19874	43373
303	303		KBY15_IMG_7695-15903.png	0.9051282	3883	60839	801
304	304		DZK15_IMG_2565-5643.png	0.30458418	3362	46822	14662
305	305		DZK15_IMG_6327-7866.png	0.9844415	10630	54570	282

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		id	png	Dice_score	True_Positive	True_Negative	False_Ne
306	306		DZK15_IMG_2223-4275.png	0.92845064	10433	53495	1608
307	307		DZK15_IMG_7353-1539.png	0.37991124	5734	41084	18191
308	308		DZK15_IMG_5472-2907.png	0.14133738	2790	28846	33812
309	309		DZKN15_IMG_8892-4788.png	0.0038883274	50	39868	25570
310	310		DZK15_IMG_9234-4446.png	0.17976819	1993	45356	17659
311	311		KBY15_IMG_6840-16416.png	0.5942074	2862	58765	3908
312	312		DZK15_IMG_4788-10773.png	0.97121793	15151	49487	770
313	313		DZK15_IMG_1710-4788.png	0.16958724	2913	34095	27695
314	314		DZK15_IMG_4617-1710.png	0.7721889	9357	50658	5472
315	315		DZK15_IMG_7524-7182.png	0.9456265	1400	63975	6
316	316		DZK15_IMG_8550-4959.png	0.80497926	3298	60640	1375
317	317		DZK15_IMG_7182-7866.png	0.8822333	7158	56467	1790
318	318		DZK15_IMG_4617-10260.png	0.90618414	16126	46071	2116
319	319		DZK15_IMG_3420-12483.png	0.7771601	3355	60257	1835
320	320		DZK15_IMG_3078-9576.png	0.98720956	8220	57103	154
321	321		DZK15_IMG_4104-7353.png	0.38914648	9358	26799	28723
322	322		DZK15_IMG_2736-9918.png	0.6183678	2902	59052	2427
323	323		DZK15_IMG_7353-6156.png	0.14505093	2385	35036	27972
324	324		DZK15_IMG_5643-11115.png	0.39253202	8473	30838	25632
325	325		DZK15_IMG_3762-10260.png	0.048742708	944	27746	36783
326	326		DZK15_IMG_4104-1710.png	nan	0	65317	172
327	327		KBY15_IMG_28557-24111.png	0.01818562	87	56055	9348
328	328		DZK15_IMG_2907-10431.png	0.86516535	4591	59514	1233
329	329		DZK15_IMG_3249-8208.png	0.77972436	9591	50526	4765
330	330		DZKN15_IMG_7866-4788.png	0.9630274	7202	57781	245
331	331		DZKN15_IMG_2736-6498.png	0.061696656	48	64028	1204
332	332		DZK15_IMG_4959-8550.png	0.26384637	4871	33484	26365
333	333		DZK15_IMG_1710-7866.png	0.75804657	5099	57182	2304

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative
334	334	DZK15_IMG_4275-4446.png	0.10047209	1660	34152	29627	
335	335	DZK15_IMG_7866-3078.png	0.23277986	3638	37917	22899	
336	336	DZK15_IMG_4104-10602.png	0.47556826	2657	57019	5855	
337	337	DZK15_IMG_4959-2907.png	0.2041628	4414	26710	34182	
338	338	KBY15_IMG_13851-22401.png	0.7546593	2470	61460	1517	
339	339	KBY15_IMG_15390-22743.png	0.9144548	9733	53982	1734	
340	340	DZKN15_IMG_5814-855.png	0.9423694	3671	61416	364	
341	341	DZK15_IMG_7011-8721.png	0.68270135	4357	57129	2280	
342	342	DZKN15_IMG_4617-5472.png	0.13932173	76	64521	886	
343	343	DZK15_IMG_3591-9405.png	0.59958035	11002	39839	13812	
344	344	DZK15_IMG_8379-1026.png	0.037380043	557	36291	28500	
345	345	KBY15_IMG_15048-2223.png	0.8239944	4691	58841	1615	
346	346	DZK15_IMG_2907-10944.png	0.019075144	33	62109	3182	
347	347	KBY15_IMG_30267-12825.png	0.123364486	33	65034	372	
348	348	DZKN15_IMG_5643-684.png	0.6600975	6163	53026	3514	
349	349	DZKN15_IMG_1026-7011.png	0.14557672	65	64708	743	
350	350	DZKN15_IMG_7695-4788.png	0.969979	5315	59892	180	
351	351	KBY15_IMG_13509-22401.png	0.8970512	867	64470	198	
352	352	KBY15_IMG_7866-16758.png	0.33103448	96	65052	382	
353	353	DZKN15_IMG_2223-6156.png	0.9082375	1935	63210	103	
354	354	KBY15_IMG_30438-23940.png	0.35752326	7619	30534	26838	
355	355	DZKN15_IMG_5985-2907.png	0.47897354	9687	34774	20309	
356	356	DZK15_IMG_4275-9918.png	0.004132231	1	65053	1	
357	357	DZK15_IMG_4959-11628.png	0.15599783	4166	16291	44975	
358	358	KBY15_IMG_2565-17613.png	0.91603243	7282	56919	1302	
359	359	DZK15_IMG_7182-3762.png	0.15409632	616	58157	6681	
360	360	DZK15_IMG_5301-3420.png	0.46141315	5097	48540	11414	
361	361	DZK15_IMG_4959-1710.png	0.5147017	3606	55130	6027	

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		id	png	Dice_score	True_Positive	True_Negative	False_Ne
362	362	KBY15_IMG_29241-12825.png	nan	0	64361	2	
363	363	DZK15_IMG_4275-11286.png	0.17535116	2815	36244	26338	
364	364	DZK15_IMG_3591-8379.png	0.081023455	19	65086	30	
365	365	DZK15_IMG_4617-4446.png	0.00086422963	5	53970	11012	
366	366	DZK15_IMG_3591-13509.png	0.28164116	810	60594	4091	
367	367	DZK15_IMG_6327-5472.png	0.74500126	5887	55619	2936	
368	368	DZK15_IMG_3249-7866.png	0.84070534	5626	57778	1818	
369	369	DZK15_IMG_2223-9576.png	0.42745787	10611	26500	28113	
370	370	DZK15_IMG_5643-2052.png	nan	0	64322	11	
371	371	KBY15_IMG_27702-27189.png	0.8439185	2817	61677	228	
372	372	DZK15_IMG_5643-2736.png	0.3331495	302	64025	1029	
373	373	KBY15_IMG_3078-17613.png	0.7384486	5274	56526	3055	
374	374	DZKN15_IMG_7524-3591.png	0.27377576	724	60971	3836	
375	375	KBY15_IMG_31977-22230.png	0.9025058	4448	60127	560	
376	376	DZK15_IMG_6669-4104.png	0.9486473	9994	54460	745	
377	377	DZK15_IMG_4788-9234.png	0.8840927	4977	59254	793	
378	378	KBY15_IMG_31806-22230.png	0.8827095	13539	48399	3369	
379	379	DZK15_IMG_2052-8721.png	0.092427716	1090	43040	21165	
380	380	KBY15_IMG_12825-10602.png	0.5973175	9486	43260	12030	
381	381	DZK15_IMG_3933-10602.png	0.33525038	6558	32971	25884	
382	382	DZK15_IMG_4959-12483.png	0.84583694	10677	50967	3485	
383	383	KBY15_IMG_2907-14706.png	0.002824859	3	63415	1166	
384	384	KBY15_IMG_30096-12654.png	0.9285714	1534	63766	235	
385	385	DZK15_IMG_3591-11286.png	0.7311077	5442	56091	3828	
386	386	KBY15_IMG_17955-24624.png	0.068398334	1418	25491	38518	
387	387	KBY15_IMG_29070-12483.png	0.94145274	9222	55167	1142	
388	388	DZKN15_IMG_8892-5130.png	nan	0	61576	84	
389	389	DZK15_IMG_7866-2223.png	0.3897097	6370	39215	19686	

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative
390	390		DZK15_IMG_5985-6669.png	0.043248873	623	37349	27438
391	391		DZK15_IMG_1368-9918.png	0.6029625	4376	55397	5757
392	392		DZKN15_IMG_1710-5985.png	0.9672682	14953	49571	276
393	393		DZK15_IMG_5472-9405.png	0.14526792	835	54875	9514
394	394		KBY15_IMG_13509-22572.png	0.33453172	1861	56271	6295
395	395		DZK15_IMG_2565-3762.png	nan	0	61259	192
396	396		DZKN15_IMG_6840-2736.png	0.33603895	621	62461	2221
397	397		DZKN15_IMG_6840-4617.png	0.13269706	723	55362	6509
398	398		DZK15_IMG_4446-3078.png	0.935003	784	64643	16
399	399		DZK15_IMG_5472-4446.png	0.45079365	994	62120	1816
400	400		DZK15_IMG_7353-5301.png	0.8646782	1377	63728	431
401	401		DZK15_IMG_3249-13680.png	0.97171384	5840	59356	0
402	402		KBY15_IMG_11286-9747.png	0.092709444	1484	35006	28979
403	403		DZK15_IMG_3762-4617.png	0.19601439	4200	26882	34328
404	404		DZK15_IMG_6840-3249.png	0.6468836	2932	59403	2184
405	405		DZK15_IMG_4446-4617.png	0.22409472	4202	32236	28115
406	406		DZK15_IMG_5814-8892.png	0.9614743	5765	59309	11
407	407		KBY15_IMG_20520-23085.png	0.19601531	487	61054	3200
408	408		KBY15_IMG_14877-3420.png	0.69671965	5193	55822	4138
409	409		KBY15_IMG_15390-2736.png	0.16385219	3037	31503	30954
410	410		KBY15_IMG_7182-16587.png	0.7121813	4303	57755	3343
411	411		KBY15_IMG_7011-9918.png	0.7949113	1031	63973	372
412	412		KBY15_IMG_11115-4446.png	0.13265306	39	64987	14
413	413		DZKN15_IMG_6840-2907.png	0.6765922	1636	62336	1551
414	414		DZK15_IMG_2052-7011.png	0.56854945	7786	45933	11061
415	415		KBY15_IMG_4104-13167.png	0.44033396	6856	41252	16867
416	416		DZK15_IMG_4275-9234.png	0.90935487	2819	62155	429
417	417		KBY15_IMG_28386-22059.png	0.011046672	20	61935	3045

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		id	png	Dice_score	True_Positive	True_Negative	False_Ne
418	418	DZK15_IMG_3078-4446.png	0.6971272	1274	63155	1087	
419	419	DZK15_IMG_4959-6156.png	0.15372224	3149	27715	32762	
420	420	KBY15_IMG_32661-24282.png	0.077176474	82	63493	1419	
421	421	KBY15_IMG_11970-4446.png	nan	0	63696	1805	
422	422	DZK15_IMG_4446-2565.png	0.10756539	1532	38583	25356	
423	423	DZK15_IMG_2394-13680.png	0.6363636	133	65251	33	
424	424	KBY15_IMG_14193-3249.png	0.31944445	6670	30446	27885	
425	425	KBY15_IMG_24624-17955.png	0.9788988	4987	60334	23	
426	426	DZK15_IMG_7353-6327.png	0.12134262	1916	35872	27650	
427	427	DZK15_IMG_3762-14022.png	0.25877482	1187	57549	5802	
428	428	KBY15_IMG_9405-5301.png	0.18397598	3891	27128	33936	
429	429	DZK15_IMG_3933-8721.png	0.012422361	10	63936	1560	
430	430	DZK15_IMG_2052-4275.png	0.30736238	4730	39488	20819	
431	431	DZK15_IMG_6498-5643.png	0.5100969	6315	47091	11338	
432	432	DZK15_IMG_7524-3762.png	0.35296118	1037	60697	3793	
433	433	DZKN15_IMG_7011-4275.png	0.8931491	3005	61812	692	
434	434	DZKN15_IMG_2052-4275.png	0.74646854	4069	58703	2763	

[All dataset] EfficientNet B1 U-Net (OCC transferred-trained)

	id	png	Dice_score	True_Positive	True_Negative	False_Negative
0	0	DZK15_IMG_7695-3762.png	0.6217819	3828	57051	978
1	1	DZKN15_IMG_6840-2907.png	0.92047095	2228	62923	227
2	2	DZK15_IMG_6840-3078.png	0.922908	35310	24327	992
3	3	DZK15_IMG_7524-3249.png	0.9157795	3871	60953	164
4	4	KBY15_IMG_29925-23256.png	0.87646216	6481	57228	490
5	5	KBY15_IMG_3078-14535.png	0.90478396	4889	59618	383
6	6	DZK15_IMG_8037-4104.png	0.7199705	14691	39417	6825
7	7	DZK15_IMG_3249-8208.png	0.8855609	17740	43211	2653
8	8	DZKN15_IMG_5985-3762.png	nan	0	65528	4
9	9	KBY15_IMG_11286-9747.png	0.9369972	8269	56155	848
10	10	DZKN15_IMG_4617-5643.png	0.8130118	14346	44591	356
11	11	DZK15_IMG_1197-9918.png	0.8288729	21324	35407	1730
12	12	DZK15_IMG_4446-7182.png	0.71975636	827	64065	342
13	13	DZK15_IMG_3591-9918.png	0.8975119	35458	21980	2369
14	14	DZK15_IMG_2736-10260.png	0.7746977	13680	43899	736
15	15	KBY15_IMG_3933-13509.png	0.87111443	16478	44182	33
16	16	DZK15_IMG_7524-5985.png	0.97674674	8737	56383	27
17	17	DZK15_IMG_5985-10773.png	0.7915099	4102	59273	394
18	18	DZK15_IMG_3933-8721.png	0.4982767	1012	62486	48
19	19	DZKN15_IMG_5643-684.png	0.96080154	5466	59624	29
20	20	KBY15_IMG_19836-15732.png	0.78633565	13017	45445	1887
21	21	DZK15_IMG_7866-3078.png	0.97329575	8802	56251	217
22	22	DZK15_IMG_7524-7182.png	0.7948286	24991	27643	4204
23	23	DZK15_IMG_2394-13680.png	0.8782459	32604	23892	2921
24	24	DZKN15_IMG_7866-4788.png	0.9805499	6705	58565	205
25	25	DZK15_IMG_7353-1539.png	0.9739548	10134	54860	277

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		id	png	Dice_score	True_Positive	True_Negative	False_Neg
26	26	KBY15_IMG_30780-24282.png	0.9141539	8322	55651	7	
27	27	DZK15_IMG_7182-7866.png	0.70460165	9838	47449	2847	
28	28	KBY15_IMG_4104-13167.png	0.8533788	3757	60488	1266	
29	29	KBY15_IMG_7182-9918.png	0.9183387	28789	31627	1207	
30	30	KBY15_IMG_7524-9405.png	0.5902046	476	64399	119	
31	31	DZK15_IMG_3420-12312.png	0.8742406	35617	19672	1269	
32	32	DZK15_IMG_3933-10602.png	0.8637912	32834	22347	1721	
33	33	DZK15_IMG_2223-2736.png	0.84534085	24476	32104	4124	
34	34	KBY15_IMG_9747-4104.png	0.7230685	8474	50571	230	
35	35	DZK15_IMG_3591-6156.png	0.84809023	21494	36342	893	
36	36	DZK15_IMG_3078-4446.png	0.71175075	2547	60926	320	
37	37	DZK15_IMG_4788-9234.png	0.9227804	28961	31728	1713	
38	38	KBY15_IMG_29583-12483.png	0.9262145	2021	63193	64	
39	39	DZKN15_IMG_6669-3249.png	0.95683634	5686	59337	84	
40	40	DZK15_IMG_2736-11286.png	0.76670146	17255	37780	769	
41	41	DZK15_IMG_3762-7182.png	0.93483895	14612	48887	179	
42	42	DZKN15_IMG_5814-4788.png	0.45198575	1838	59241	123	
43	43	DZK15_IMG_5301-2394.png	0.9591903	4407	60754	275	
44	44	DZK15_IMG_2223-9576.png	0.8278118	28598	25041	968	
45	45	KBY15_IMG_12825-7695.png	0.9591217	4892	60227	224	
46	46	DZK15_IMG_4788-8721.png	0.8972464	34605	23005	1295	
47	47	DZK15_IMG_8550-4959.png	0.4552894	1530	60345	443	
48	48	DZK15_IMG_4104-7353.png	0.9528061	5229	59789	302	
49	49	DZK15_IMG_1368-6327.png	0.8709677	216	65256	41	
50	50	DZKN15_IMG_6156-4104.png	0.8357994	26041	29263	3838	
51	51	DZK15_IMG_5814-3078.png	0.9207322	34103	25561	1822	
52	52	KBY15_IMG_14877-22743.png	0.000880088	10	42821	74	
53	53	DZK15_IMG_4959-2907.png	0.78911287	27572	23227	2767	

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative
54	54		KBY15_IMG_14193-3249.png	0.8029409	31562	18482	321
55	55		KBY15_IMG_20178-22914.png	0.8904658	29677	28558	789
56	56		KBY15_IMG_8037-16416.png	0.8532393	36066	17063	2286
57	57		KBY15_IMG_19836-15903.png	0.9438819	3263	61885	107
58	58		DZK15_IMG_3249-13509.png	0.85105205	18344	40771	503
59	59		KBY15_IMG_23256-18810.png	0.7748184	2240	61994	807
60	60		DZK15_IMG_4617-5301.png	0.6576677	8234	48730	2704
61	61		DZK15_IMG_3420-3249.png	0.908845	6047	58276	1083
62	62		DZK15_IMG_6840-4617.png	0.7752588	3146	60566	20
63	63		DZK15_IMG_1197-8208.png	0.8507894	31928	22409	1401
64	64		KBY15_IMG_20520-23085.png	0.9358586	6646	57979	186
65	65		DZK15_IMG_4446-2565.png	0.9356029	6211	58470	304
66	66		KBY15_IMG_12483-21717.png	0.90656155	32648	26158	1343
67	67		KBY15_IMG_10602-3762.png	0.94482964	6405	58383	232
68	68		DZKN15_IMG_8379-4959.png	0.6108051	2606	59609	217
69	69		DZKN15_IMG_7182-4275.png	0.93457943	3300	61774	387
70	70		KBY15_IMG_32661-24282.png	0.78997475	26886	24354	985
71	71		DZK15_IMG_3420-8892.png	0.9025542	6979	57050	10
72	72		DZK15_IMG_4788-11628.png	0.923881	10517	53286	222
73	73		KBY15_IMG_30096-12654.png	0.9514245	18284	45385	1379
74	74		DZK15_IMG_2736-14022.png	0.848874	38673	13093	1263
75	75		KBY15_IMG_27702-27189.png	0.15242586	388	60833	1263
76	76		KBY15_IMG_28557-24111.png	0.87395877	37190	17619	1534
77	77		DZK15_IMG_3420-12483.png	0.8273417	20068	37092	459
78	78		DZK15_IMG_3420-5814.png	0.7950099	23547	29846	5606
79	79		DZK15_IMG_2223-11457.png	0.895316	29857	28697	2460
80	80		DZK15_IMG_3420-8721.png	0.8647014	26868	30260	3740
81	81		DZK15_IMG_7182-3762.png	0.8242027	19656	37495	890

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		id	png	Dice_score	True_Positive	True_Negative	False_Neg
82	82		DZK15_IMG_4275-4446.png	0.9380298	6418	58270	79
83	83		KBY15_IMG_13509-22401.png	0.86104375	1419	63659	82
84	84		DZK15_IMG_4788-11115.png	0.9133464	4195	60545	523
85	85		KBY15_IMG_7011-10431.png	0.9587568	802	64665	6
86	86		DZKN15_IMG_1026-7011.png	0.7187639	8862	49739	86
87	87		DZKN15_IMG_8550-4275.png	0.62449116	2838	59285	227
88	88		DZK15_IMG_7695-2907.png	0.939371	13650	50124	512
89	89		DZK15_IMG_5130-11457.png	0.64230996	1635	62080	206
90	90		KBY15_IMG_14535-22914.png	0.9106995	6588	57656	1058
91	91		DZK15_IMG_2394-10431.png	0.6420294	14072	35772	1244
92	92		KBY15_IMG_7524-17271.png	0.8163655	16671	41365	1639
93	93		KBY15_IMG_7695-15903.png	0.9278464	3382	61628	111
94	94		KBY15_IMG_15048-2223.png	0.934299	15223	48172	6
95	95		DZK15_IMG_4275-4275.png	0.9806094	4071	61304	19
96	96		DZK15_IMG_6498-3420.png	0.9242069	5725	58872	99
97	97		DZK15_IMG_4104-12996.png	0.9102534	27050	33152	772
98	98		DZK15_IMG_3591-4275.png	0.9500949	5007	60003	3
99	99		DZK15_IMG_2907-12825.png	0.9717591	2856	62514	46
100	100		DZK15_IMG_2565-5643.png	0.0018281535	1	64443	1
101	101		DZK15_IMG_7011-5472.png	0.81062526	11215	49081	809
102	102		DZK15_IMG_5301-3420.png	0.93442667	18461	44484	43
103	103		KBY15_IMG_11970-3762.png	0.74667346	5808	55787	1552
104	104		DZK15_IMG_2565-11115.png	0.96114594	21472	42328	542
105	105		DZK15_IMG_6156-3078.png	0.94760555	11991	52219	455
106	106		KBY15_IMG_30438-24111.png	0.87759614	33339	22897	2407
107	107		DZK15_IMG_1539-12483.png	0.9091854	10502	52936	301
108	108		KBY15_IMG_19836-16416.png	0.96272755	3332	61946	56
109	109		KBY15_IMG_13680-22401.png	0.708382	3334	59457	296

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				Dice_score	True_Positive	True_Negative	False_Negative
110	110	DZK15_IMG_6156-1710.png		0.9291829	3582	61408	115
111	111	DZK15_IMG_4275-9918.png		0.6829687	796	64001	4
112	112	KBY15_IMG_23085-9234.png		0.8518535	28529	27084	4465
113	113	DZK15_IMG_2907-10944.png		0.7689266	25285	25054	1603
114	114	DZK15_IMG_2907-3762.png		0.9659705	4556	60659	128
115	115	DZK15_IMG_2394-11799.png		0.8630863	4315	59852	10
116	116	DZK15_IMG_2736-9747.png		0.8738232	4827	59315	2
117	117	DZK15_IMG_7353-6327.png		0.93271697	7264	57224	405
118	118	DZK15_IMG_5643-3933.png		0.9466226	1002	64421	63
119	119	DZK15_IMG_3591-9405.png		0.86502606	40177	12821	673
120	120	DZK15_IMG_1368-10602.png		0.94493395	1716	63620	53
121	121	DZK15_IMG_5472-4446.png		0.9053763	6736	57392	85
122	122	DZK15_IMG_2565-5130.png		0.9032009	35074	22944	1489
123	123	KBY15_IMG_22743-9576.png		0.84232545	21545	35925	4452
124	124	DZK15_IMG_4104-9405.png		0.7610117	4829	57674	0
125	125	KBY15_IMG_10773-3420.png		0.95963484	7358	57559	45
126	126	DZK15_IMG_8721-4446.png		0.76752347	12795	44990	1984
127	127	KBY15_IMG_13680-20520.png		0.9536188	10455	54064	547
128	128	KBY15_IMG_20007-23598.png		nan	0	65379	0
129	129	KBY15_IMG_10773-2907.png		0.8666666	377	65043	28
130	130	DZK15_IMG_5301-1368.png		0.80339843	21560	33424	2365
131	131	KBY15_IMG_7011-16245.png		nan	0	65500	33
132	132	DZK15_IMG_4788-4446.png		0.8195406	1124	63917	87
133	133	DZKN15_IMG_6840-4617.png		0.85346967	24530	32583	284
134	134	DZK15_IMG_5985-8550.png		0.8833348	30324	27202	2110
135	135	KBY15_IMG_7011-9918.png		0.61302686	800	63726	960
136	136	DZK15_IMG_4104-1710.png		0.7805393	28092	21647	765
137	137	DZK15_IMG_7353-6156.png		0.74376076	20131	31534	1720

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		id	png	Dice_score	True_Positive	True_Negative	False_Neg
138	138		DZK15_IMG_1881-6156.png	0.9211132	6603	57802	315
139	139		DZK15_IMG_6840-9063.png	0.7113775	29493	12111	318
140	140		DZKN15_IMG_2565-6498.png	0.8336822	34048	17903	1863
141	141		DZK15_IMG_7011-7353.png	0.80045444	7397	54451	81
142	142		DZK15_IMG_5472-3420.png	0.943699	6822	57900	542
143	143		DZK15_IMG_5814-5814.png	0.8071874	6918	55313	314
144	144		DZKN15_IMG_6840-2736.png	0.7802568	24305	27541	396
145	145		DZK15_IMG_6156-4446.png	0.11008856	951	49210	9415
146	146		DZKN15_IMG_2052-4275.png	0.8901791	37258	19085	2214
147	147		KBY15_IMG_3591-14877.png	0.91843975	4662	60046	555
148	148		DZK15_IMG_4275-2565.png	0.9600271	2834	62466	123
149	149		DZKN15_IMG_1881-5472.png	nan	0	64276	11
150	150		KBY15_IMG_3078-16929.png	0.981946	6146	59164	97
151	151		KBY15_IMG_3249-14706.png	0.92516875	31607	28816	1368
152	152		DZK15_IMG_4617-10260.png	0.22222224	1	65528	5
153	153		DZK15_IMG_2394-4959.png	0.68687934	8473	49338	760
154	154		KBY15_IMG_14877-3420.png	0.9748176	10084	54931	280
155	155		KBY15_IMG_23256-18468.png	0.8191693	23982	30966	2382
156	156		DZK15_IMG_3249-11115.png	0.9049429	9401	54160	1511
157	157		DZK15_IMG_3762-4959.png	0.74783254	9014	50443	421
158	158		DZK15_IMG_5472-2907.png	0.8645883	35749	18589	5071
159	159		KBY15_IMG_7353-16929.png	0.7642563	15848	39911	3439
160	160		DZK15_IMG_3591-11799.png	0.87876135	9024	54022	821
161	161		KBY15_IMG_6669-16587.png	0.82481885	32662	19000	1474
162	162		KBY15_IMG_19836-16074.png	0.9377423	39915	20321	961
163	163		DZK15_IMG_7524-3762.png	0.89416116	29510	29040	2060
164	164		DZKN15_IMG_8721-5130.png	0.78925836	24306	28250	2820
165	165		KBY15_IMG_14877-2394.png	0.97223437	3344	62001	75

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative
166	166	KBY15_IMG_12996-7353.png	0.7006158	9727	47496	58	
167	167	KBY15_IMG_14706-23085.png	0.96344393	3413	61864	39	
168	168	KBY15_IMG_28044-13167.png	0.9497507	1238	64167	16	
169	169	DZK15_IMG_1881-7011.png	0.8586881	27864	28501	2987	
170	170	DZK15_IMG_3933-12654.png	0.9008815	2504	62481	528	
171	171	KBY15_IMG_17955-24453.png	0.92073065	5192	59450	137	
172	172	DZKN15_IMG_6840-3933.png	0.9167244	10579	53035	450	
173	173	DZK15_IMG_5643-11970.png	0.93001556	598	64848	38	
174	174	DZK15_IMG_7353-1710.png	0.9369261	8571	55811	252	
175	175	DZK15_IMG_4617-1710.png	0.94593185	16323	47347	613	
176	176	KBY15_IMG_28215-22059.png	0.7851683	2414	61801	0	
177	177	DZK15_IMG_6669-5814.png	0.83360094	24923	30663	1492	
178	178	DZK15_IMG_5472-10944.png	0.9623489	1393	64034	13	
179	179	DZK15_IMG_6156-4104.png	0.95044905	4709	60336	121	
180	180	KBY15_IMG_27018-15903.png	0.7944194	17538	38921	2432	
181	181	KBY15_IMG_15048-2736.png	0.10020877	96	63716	12	
182	182	KBY15_IMG_7695-10089.png	0.67520213	1503	62587	73	
183	183	KBY15_IMG_12825-21546.png	0.89238507	34629	22555	2154	
184	184	KBY15_IMG_19665-15903.png	0.5909795	15252	29172	1792	
185	185	DZK15_IMG_3762-9918.png	0.98380184	15609	49413	312	
186	186	DZKN15_IMG_1881-5814.png	nan	0	63360	11	
187	187	DZK15_IMG_5814-1368.png	0.8653028	2136	62735	412	
188	188	KBY15_IMG_10431-4617.png	0.72131145	4114	58243	232	
189	189	KBY15_IMG_11286-4617.png	0.8460073	38410	13143	6203	
190	190	DZK15_IMG_3249-7866.png	0.5525773	2278	59569	532	
191	191	DZK15_IMG_4788-9918.png	0.9092909	19417	42245	1829	
192	192	DZK15_IMG_1710-4788.png	0.9222108	1802	63430	3	
193	193	DZKN15_IMG_5130-3249.png	0.8381712	37509	13543	620	

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		id	png	Dice_score	True_Positive	True_Negative	False_Neg
194	194	194	KBY15_IMG_16416-4446.png	0.9234032	37010	22386	1003
195	195	195	DZK15_IMG_4959-1710.png	0.845924	30430	24021	3679
196	196	196	DZK15_IMG_4788-5643.png	0.8907598	2169	62835	13
197	197	197	DZK15_IMG_1710-2907.png	0.81048405	21383	34153	6142
198	198	198	DZK15_IMG_5814-6840.png	0.9131161	1093	64235	189
199	199	199	DZK15_IMG_2907-10431.png	0.9723238	1862	63568	38
200	200	200	KBY15_IMG_10602-3078.png	0.88741857	35073	21564	1237
201	201	201	DZK15_IMG_2907-7182.png	0.7743381	23663	28081	1533
202	202	202	DZK15_IMG_1881-5301.png	0.88044494	13219	48727	491
203	203	203	DZKN15_IMG_4788-3249.png	0.93513274	2148	63090	135
204	204	204	DZK15_IMG_3078-10089.png	0.8275545	29739	23403	1548
205	205	205	DZKN15_IMG_7866-5301.png	0.95973295	7186	57747	111
206	206	206	DZK15_IMG_3591-7353.png	nan	0	65513	20
207	207	207	KBY15_IMG_27873-13167.png	0.98192716	11790	53312	251
208	208	208	DZK15_IMG_7524-4104.png	0.5468686	4676	53111	5673
209	209	209	KBY15_IMG_28557-22914.png	nan	0	64562	2
210	210	210	DZK15_IMG_5643-9747.png	0.6474164	852	63756	10
211	211	211	DZK15_IMG_3762-14022.png	nan	0	64720	192
212	212	212	DZK15_IMG_5814-3933.png	0.8561331	33670	20550	1256
213	213	213	DZK15_IMG_6327-1881.png	0.54474634	2657	58438	453
214	214	214	DZK15_IMG_2907-3933.png	0.51063836	408	64346	311
215	215	215	KBY15_IMG_12825-21204.png	0.62450594	79	65362	92
216	216	216	DZKN15_IMG_855-6840.png	0.8869476	17260	43876	3022
217	217	217	DZK15_IMG_4446-3078.png	0.9233319	1114	64237	118
218	218	218	KBY15_IMG_7182-16587.png	0.901423	6113	58086	17
219	219	219	DZK15_IMG_4275-9234.png	0.922432	23653	37905	70
220	220	220	DZK15_IMG_6327-2907.png	0.9545059	7123	57734	157
221	221	221	KBY15_IMG_30267-12825.png	0.9350162	2741	62414	0

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				Dice_score	True_Positive	True_Negative	False_Negative
222	222	DZK15_IMG_2565-3762.png		0.9597859	8425	56405	164
223	223	DZK15_IMG_7011-5985.png		0.90327907	13691	48913	26
224	224	KBY15_IMG_10944-4959.png		0.9108295	7906	56082	241
225	225	DZK15_IMG_4446-4617.png		0.90149015	4507	60044	10
226	226	KBY15_IMG_29241-23769.png		0.94653016	1664	63684	144
227	227	DZK15_IMG_3933-2052.png		0.73818743	953	63907	9
228	228	KBY15_IMG_15219-2052.png		0.8349546	20514	36912	868
229	229	KBY15_IMG_6840-16416.png		0.98001355	10101	55023	63
230	230	DZK15_IMG_5814-2394.png		0.8993268	18237	43216	5
231	231	DZK15_IMG_2052-7011.png		0.8753341	29641	27452	1264
232	232	DZKN15_IMG_2736-6498.png		0.72239745	13969	40831	2841
233	233	DZK15_IMG_4959-11628.png		0.9473071	7317	57405	117
234	234	KBY15_IMG_27873-12996.png		0.78612024	14522	43112	4634
235	235	DZK15_IMG_5985-6669.png		0.95409495	3658	61526	113
236	236	KBY15_IMG_28728-11970.png		0.67971534	191	65165	1
237	237	DZK15_IMG_2052-3420.png		0.87467617	14011	47510	1353
238	238	KBY15_IMG_29241-22914.png		0.9354457	6731	57876	526
239	239	DZK15_IMG_2052-13338.png		0.8915511	11275	51518	455
240	240	DZK15_IMG_1539-7524.png		0.8786463	36296	19214	930
241	241	DZK15_IMG_3591-13509.png		0.9539078	476	65014	2
242	242	DZK15_IMG_3762-10260.png		0.86077344	19509	39716	5049
243	243	DZK15_IMG_5643-11115.png		0.7811024	24734	26939	68
244	244	DZK15_IMG_4104-2052.png		0.97431344	16462	48206	446
245	245	DZK15_IMG_1881-12996.png		0.7715479	14318	42739	4833
246	246	KBY15_IMG_27702-11457.png		0.96654403	2889	62447	85
247	247	DZK15_IMG_3078-9576.png		0.8285148	36180	14379	9411
248	248	DZK15_IMG_3591-8379.png		0.8917098	1721	63397	9
249	249	DZK15_IMG_2565-4788.png		0.7372294	5109	56785	3403

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		id	png	Dice_score	True_Positive	True_Negative	False_Neg
250	250	250	DZK15_IMG_6840-7353.png	0.7692137	20783	32282	1472
251	251	251	KBY15_IMG_15732-2907.png	0.8201376	30154	22156	1082
252	252	252	DZKN15_IMG_7011-4104.png	0.676816	778	64015	208
253	253	253	DZKN15_IMG_5814-513.png	0.8643502	8806	53966	871
254	254	254	KBY15_IMG_2565-17613.png	0.89745986	32611	25473	3666
255	255	255	DZK15_IMG_7011-8721.png	0.89057523	2934	61881	253
256	256	256	DZKN15_IMG_7695-3420.png	0.78064287	25778	25271	1387
257	257	257	DZK15_IMG_2565-10089.png	0.65	13	65509	7
258	258	258	DZK15_IMG_6327-7866.png	0.7957304	23930	29320	1619
259	259	259	DZKN15_IMG_4788-4959.png	0.8522802	24538	32492	1604
260	260	260	DZK15_IMG_5301-1881.png	0.8097354	4009	59643	337
261	261	261	KBY15_IMG_23769-19323.png	0.85275435	34172	19563	2914
262	262	262	DZKN15_IMG_5301-684.png	0.9040679	4156	60498	213
263	263	263	DZK15_IMG_3249-12825.png	0.9309143	7209	57257	32
264	264	264	DZK15_IMG_4788-5814.png	0.8683236	31320	24717	2620
265	265	265	DZK15_IMG_4446-2736.png	0.78735113	8727	52095	906
266	266	266	DZK15_IMG_7524-4275.png	0.92361647	9087	54946	1046
267	267	267	KBY15_IMG_14877-2565.png	0.91568077	46246	10773	2779
268	268	268	DZK15_IMG_2223-11628.png	0.9145338	2001	63161	0
269	269	269	KBY15_IMG_15561-2565.png	0.87182385	4632	59542	41
270	270	270	DZK15_IMG_4275-11286.png	0.57817245	1237	62494	15
271	271	271	DZK15_IMG_2223-14022.png	0.89968276	17300	44378	696
272	272	272	KBY15_IMG_19836-22743.png	0.9163951	14200	48745	240
273	273	273	DZKN15_IMG_1710-5985.png	0.9603817	3321	61941	51
274	274	274	KBY15_IMG_2907-14706.png	0.85023373	32646	21389	781
275	275	275	DZKN15_IMG_1710-4788.png	0.88386196	3790	60750	197
276	276	276	DZK15_IMG_4959-12483.png	0.84720916	31093	23228	1326
277	277	277	DZK15_IMG_4617-9576.png	nan	0	65531	2

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative
278	278	KBY15_IMG_9405-5301.png	0.86492807	37361	16506	995	
279	279	DZKN15_IMG_5814-855.png	0.84695566	33802	19518	6764	
280	280	DZK15_IMG_5643-2052.png	0.73911583	5509	56138	1714	
281	281	DZK15_IMG_5130-11970.png	0.9013007	35477	22289	1082	
282	282	DZK15_IMG_4446-5130.png	0.79835975	2823	61287	425	
283	283	DZKN15_IMG_5985-2907.png	0.8739221	32634	23486	2767	
284	284	KBY15_IMG_29070-11970.png	0.314554	402	63382	0	
285	285	DZKN15_IMG_5985-1368.png	0.7879575	23660	29142	9683	
286	286	DZK15_IMG_1881-10944.png	0.7610282	4796	57728	3	
287	287	KBY15_IMG_29412-22914.png	0.08326106	48	64431	1	
288	288	DZK15_IMG_6498-5643.png	0.72361803	144	65282	22	
289	289	DZKN15_IMG_7011-4275.png	0.8301233	37605	12540	476	
290	290	DZK15_IMG_1881-13338.png	0.42778796	1287	60806	145	
291	291	KBY15_IMG_7524-8550.png	0.9345122	7927	56498	343	
292	292	DZK15_IMG_2565-14193.png	0.85943586	33787	20697	3849	
293	293	KBY15_IMG_13851-22401.png	0.9164287	42191	15650	1041	
294	294	DZK15_IMG_2736-9576.png	0.92042214	2747	62314	6	
295	295	DZK15_IMG_1539-10944.png	0.736085	1177	63515	615	
296	296	KBY15_IMG_17955-24624.png	0.9120531	28270	31814	1209	
297	297	DZKN15_IMG_6669-3420.png	0.0017714791	1	64408	109	
298	298	KBY15_IMG_14364-22743.png	0.8792373	10375	52311	1092	
299	299	DZK15_IMG_4617-8721.png	0.9273493	20353	41994	346	
300	300	KBY15_IMG_30951-21717.png	0.60278964	14542	31829	287	
301	301	DZK15_IMG_2736-5130.png	0.9050646	30469	28675	1295	
302	302	KBY15_IMG_31806-22230.png	0.87276465	8077	55104	79	
303	303	DZK15_IMG_7353-5301.png	0.84579104	4215	59784	742	
304	304	DZK15_IMG_7182-5130.png	0.8732501	36928	17888	1600	
305	305	DZK15_IMG_2223-4275.png	0.9551026	6350	58589	80	

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		id	png	Dice_score	True_Positive	True_Negative	False_Neg
306	306		DZK15_IMG_6840-3249.png	0.8687475	27207	30108	3150
307	307		DZK15_IMG_9234-4446.png	0.8769661	26455	31658	1606
308	308		DZK15_IMG_2223-6669.png	0.874688	34342	21354	2252
309	309		KBY15_IMG_3933-13167.png	0.72454387	7941	51557	170
310	310		KBY15_IMG_6669-9918.png	0.9335499	7186	57327	547
311	311		DZKN15_IMG_8721-4788.png	0.88644475	36268	19976	1459
312	312		DZK15_IMG_8208-3078.png	0.9197092	5630	58923	16
313	313		DZK15_IMG_5472-9234.png	0.96248156	1629	63780	48
314	314		KBY15_IMG_11970-4446.png	0.6393443	273	64955	3
315	315		KBY15_IMG_16074-21717.png	0.63970363	1036	63333	0
316	316		DZK15_IMG_5643-1710.png	0.79443026	4821	58220	292
317	317		DZK15_IMG_5643-2736.png	0.9556748	16731	47253	640
318	318		KBY15_IMG_15390-22743.png	0.8831388	32987	23819	1118
319	319		DZK15_IMG_4104-13680.png	0.80187845	6745	55458	2
320	320		DZKN15_IMG_4617-4617.png	0.8536523	35077	18432	1680
321	321		KBY15_IMG_3762-13509.png	0.8639493	35831	18420	751
322	322		DZK15_IMG_7695-5301.png	0.85226023	28751	26817	1235
323	323		KBY15_IMG_14877-22572.png	0.9041444	6763	57339	681
324	324		DZKN15_IMG_6156-1539.png	0.9485185	7379	57356	68
325	325		KBY15_IMG_3078-17613.png	0.92058325	12722	50619	347
326	326		KBY15_IMG_12654-21204.png	0.9844806	13036	52089	137
327	327		DZK15_IMG_6669-3420.png	0.8969498	15615	46333	14
328	328		DZK15_IMG_3249-10602.png	0.7446186	1401	63174	2
329	329		DZK15_IMG_5130-6840.png	0.89503735	2038	63020	0
330	330		DZKN15_IMG_6840-5472.png	0.9001812	35527	22130	1178
331	331		KBY15_IMG_10773-10773.png	0.8226031	1776	62994	99
332	332		DZK15_IMG_4788-3933.png	0.964431	15889	48475	545
333	333		DZKN15_IMG_8892-5130.png	0.7689759	26001	23912	1089

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				Dice_score	True_Positive	True_Negative	False_Negative
334	334	KBY15_IMG_15390-2736.png		0.9114636	47737	8525	1404
335	335	DZK15_IMG_4104-10602.png		0.6272582	2743	59533	2158
336	336	DZK15_IMG_3420-6327.png		0.53333336	364	64535	127
337	337	KBY15_IMG_7353-16074.png		0.93840337	15029	48534	77
338	338	KBY15_IMG_9918-13338.png		0.8410019	33778	18986	679
339	339	DZK15_IMG_2736-7524.png		0.90630376	2897	62040	148
340	340	KBY15_IMG_13509-22572.png		0.9000604	4467	60077	93
341	341	KBY15_IMG_29241-12825.png		0.83521175	8596	53548	735
342	342	DZK15_IMG_7011-5643.png		0.8846803	5769	58263	7
343	343	DZK15_IMG_6669-4104.png		0.9352331	13718	49918	779
344	344	DZK15_IMG_5643-5814.png		0.6672913	3917	57713	0
345	345	KBY15_IMG_9918-3762.png		0.91700745	19513	42491	139
346	346	DZK15_IMG_6840-3762.png		0.9171655	4750	59928	19
347	347	DZK15_IMG_1710-6498.png		0.8819764	9300	53747	1409
348	348	DZK15_IMG_8379-2907.png		0.964404	5825	59281	15
349	349	DZK15_IMG_7866-2223.png		0.875164	18676	41532	1861
350	350	KBY15_IMG_7353-17100.png		0.58018607	2120	60348	355
351	351	DZKN15_IMG_0-6669.png		0.24777262	292	63471	506
352	352	KBY15_IMG_15048-3591.png		0.92447567	6457	58024	313
353	353	DZK15_IMG_4788-10773.png		0.7429202	14809	40478	1221
354	354	KBY15_IMG_28044-12312.png		0.9121319	37438	20885	1493
355	355	DZK15_IMG_3933-6840.png		0.9153079	6933	57320	6
356	356	DZK15_IMG_3249-13680.png		0.91662246	1726	63496	0
357	357	DZK15_IMG_5472-9405.png		0.7319434	21925	27552	6336
358	358	KBY15_IMG_12825-21888.png		0.8172874	25378	28811	678
359	359	DZK15_IMG_4959-6156.png		0.9833432	8324	56930	50
360	360	DZK15_IMG_4788-7182.png		0.67083025	10043	45637	1312
361	361	DZK15_IMG_2052-12654.png		0.78095233	82	65408	42

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		id	png	Dice_score	True_Positive	True_Negative	False_Neg
362	362		DZKN15_IMG_1197-5814.png	0.9403521	22142	40585	69
363	363		DZK15_IMG_1710-13338.png	0.97082406	4359	60915	14
364	364		DZKN15_IMG_855-7011.png	0.55220413	2737	58360	1489
365	365		KBY15_IMG_30438-23940.png	0.9549668	10200	54374	441
366	366		DZKN15_IMG_5814-1881.png	0.79292995	5675	56897	197
367	367		DZK15_IMG_2736-9918.png	0.9151316	2782	62238	60
368	368		DZK15_IMG_1368-9918.png	0.95867765	1450	63961	47
369	369		DZK15_IMG_4959-11457.png	0.83873814	4746	58965	444
370	370		DZK15_IMG_3762-6669.png	0.86523914	4061	60210	1215
371	371		DZK15_IMG_4959-8892.png	0.7109971	12061	43670	652
372	372		DZK15_IMG_8208-6327.png	0.92114496	14304	48783	52
373	373		DZKN15_IMG_4788-4104.png	0.70130616	6094	54251	3176
374	374		DZKN15_IMG_7182-4104.png	0.8399896	32243	21009	910
375	375		DZKN15_IMG_5814-1710.png	0.34490108	1456	58549	32
376	376		KBY15_IMG_29070-12483.png	0.6666667	28	65480	25
377	377		KBY15_IMG_17955-25650.png	0.6742596	148	65245	24
378	378		DZK15_IMG_6327-6327.png	0.815913	3302	60744	251
379	379		DZK15_IMG_6327-5472.png	0.38380358	891	61784	0
380	380		KBY15_IMG_20349-15561.png	0.7679117	18494	35863	407
381	381		DZK15_IMG_8379-1026.png	0.7699203	8503	51951	4270
382	382		DZKN15_IMG_2223-6156.png	0.9531195	4117	61014	182
383	383		DZK15_IMG_4959-8379.png	0.9196905	6894	57438	39
384	384		DZK15_IMG_2052-4275.png	0.8936567	11017	51897	0
385	385		DZK15_IMG_1710-12312.png	0.8767809	27477	30336	2986
386	386		DZK15_IMG_6498-7524.png	0.8099047	25970	27375	1372
387	387		DZK15_IMG_5643-11799.png	0.8610687	564	64790	46
388	388		DZK15_IMG_3249-3591.png	0.84044623	8665	53581	282
389	389		DZK15_IMG_3591-11286.png	0.9019708	31877	26730	1352

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative
390	390	KBY15_IMG_12825-10602.png	0.8491029	6578	56620	753	
391	391	DZKN15_IMG_5985-4617.png	0.9451796	250	65257	4	
392	392	DZK15_IMG_3933-13851.png	0.54990375	1000	62899	23	
393	393	DZK15_IMG_3420-13167.png	0.7714981	24107	27149	4044	
394	394	KBY15_IMG_14364-3420.png	0.8341752	36989	13841	1607	
395	395	DZKN15_IMG_5814-2907.png	0.7525975	27235	20395	5207	
396	396	KBY15_IMG_29070-12996.png	0.76373017	2072	62182	289	
397	397	DZK15_IMG_3762-4617.png	0.623934	3475	57872	46	
398	398	KBY15_IMG_7524-9063.png	0.93885493	34970	26011	1317	
399	399	DZK15_IMG_2565-13680.png	0.7844259	6306	55764	1116	
400	400	KBY15_IMG_32490-23256.png	0.94758093	6101	58760	0	
401	401	DZKN15_IMG_7695-4788.png	nan	0	65464	23	
402	402	DZK15_IMG_3591-6498.png	0.7866667	9263	51249	1693	
403	403	DZK15_IMG_4617-4446.png	0.96903175	2472	62906	104	
404	404	DZK15_IMG_5814-8892.png	0.8648268	36193	18029	1261	
405	405	DZKN15_IMG_7524-3591.png	0.8976874	4988	59411	20	
406	406	KBY15_IMG_28386-22059.png	0.8632493	28536	27959	1598	
407	407	KBY15_IMG_22914-9405.png	0.7849112	27820	22469	1237	
408	408	DZKN15_IMG_8892-4788.png	0.8128793	8306	53406	305	
409	409	KBY15_IMG_27360-27189.png	0.88215667	24984	33877	1553	
410	410	KBY15_IMG_31977-22230.png	0.8758544	6279	57477	27	
411	411	DZK15_IMG_5130-5130.png	0.92100036	1160	64177	171	
412	412	DZK15_IMG_7182-4788.png	0.93179756	21559	40821	791	
413	413	KBY15_IMG_24624-17955.png	0.87956464	5010	59154	31	
414	414	KBY15_IMG_13338-21888.png	0.97452694	17254	47380	577	
415	415	KBY15_IMG_12996-21375.png	0.9352409	621	64829	7	
416	416	DZKN15_IMG_4617-5472.png	0.63199914	2850	59367	14	
417	417	DZK15_IMG_7011-7695.png	0.7896595	3131	60737	84	

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		id	png	Dice_score	True_Positive	True_Negative	False_Neg
418	418	DZK15_IMG_4959-8550.png	0.9676822	15136	49389	170	
419	419	DZKN15_IMG_6498-3762.png	0.9550305	7518	57310	221	
420	420	DZK15_IMG_1710-7866.png	0.9288257	261	65235	16	
421	421	KBY15_IMG_28728-11457.png	0.7484925	20853	30669	3656	
422	422	KBY15_IMG_12483-21033.png	0.90170795	42525	13740	169	
423	423	DZKN15_IMG_6840-5814.png	0.959119	3484	61755	139	
424	424	DZK15_IMG_1881-7353.png	0.9463315	2786	62434	28	
425	425	KBY15_IMG_11115-10773.png	0.9542639	4006	61146	80	
426	426	DZK15_IMG_4446-12825.png	0.95522386	8512	56226	72	
427	427	KBY15_IMG_11115-4446.png	0.91240126	17389	44808	899	
428	428	DZK15_IMG_7524-1026.png	0.88214487	6235	57635	34	
429	429	DZK15_IMG_6327-4788.png	0.7064317	16036	36172	9584	
430	430	KBY15_IMG_7866-16758.png	0.7590928	29720	16952	869	
431	431	DZK15_IMG_3420-2223.png	0.87753767	1340	63822	230	
432	432	DZK15_IMG_2052-8721.png	0.7378229	3999	58695	1330	
433	433	DZKN15_IMG_6327-3591.png	0.8551856	33082	21250	3520	
434	434	DZK15_IMG_5301-7524.png	0.8116502	14059	44952	3594	

[All dataset] EfficientNet U-Net B2 (ImageNet)

	id	png	Dice_score	True_Positive	True_Negative	False_Negative
0	0	DZK15_IMG_7695-3762.png	0.97001034	469	65038	9
1	1	DZKN15_IMG_6840-2907.png	0.8868938	34972	21644	1622
2	2	DZK15_IMG_6840-3078.png	0.8014755	29007	22159	559
3	3	DZK15_IMG_7524-3249.png	0.7431109	9034	50256	401
4	4	KBY15_IMG_29925-23256.png	0.82029116	34257	16269	4095
5	5	KBY15_IMG_3078-14535.png	0.7982394	24755	28267	1609
6	6	DZK15_IMG_8037-4104.png	0.81226754	24247	30081	2879
7	7	DZK15_IMG_3249-8208.png	0.86856145	33219	22263	2527
8	8	DZKN15_IMG_5985-3762.png	0.9832284	15682	49319	239
9	9	KBY15_IMG_11286-9747.png	0.9671806	10727	54081	185
10	10	DZKN15_IMG_4617-5643.png	0.73114675	1527	62886	1021
11	11	DZK15_IMG_1197-9918.png	0.84478325	36577	15518	2147
12	12	DZK15_IMG_4446-7182.png	0.8822326	25006	33854	1050
13	13	DZK15_IMG_3591-9918.png	0.7642941	18888	34998	5037
14	14	DZK15_IMG_2736-10260.png	0.22254336	231	63691	567
15	15	KBY15_IMG_3933-13509.png	0.90307575	35145	22847	1418
16	16	DZK15_IMG_7524-5985.png	0.88341314	6274	57606	32
17	17	DZK15_IMG_5985-10773.png	0.93923295	13617	50157	100
18	18	DZK15_IMG_3933-8721.png	0.8255159	8580	53329	4
19	19	DZKN15_IMG_5643-684.png	0.9159438	27084	33481	738
20	20	KBY15_IMG_19836-15732.png	0.64917916	7474	49984	1796
21	21	DZK15_IMG_7866-3078.png	0.9713249	9908	55043	456
22	22	DZK15_IMG_7524-7182.png	0.89785624	3916	60729	1
23	23	DZK15_IMG_2394-13680.png	0.94907403	615	64855	13
24	24	DZKN15_IMG_7866-4788.png	0.21358567	632	60250	1019
25	25	DZK15_IMG_7353-1539.png	0.3125	5	65509	15

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		id	png	Dice_score	True_Positive	True_Negative	False_Neg
26	26	KBY15_IMG_30780-24282.png	0.6460415	1681	62013	292	
27	27	DZK15_IMG_7182-7866.png	0.9127625	565	64863	71	
28	28	KBY15_IMG_4104-13167.png	0.9270933	1456	63851	41	
29	29	KBY15_IMG_7182-9918.png	0.89043903	2170	62832	12	
30	30	KBY15_IMG_7524-9405.png	0.9253188	254	65241	23	
31	31	DZK15_IMG_3420-12312.png	0.9203654	14308	48752	48	
32	32	DZK15_IMG_3933-10602.png	0.52311695	4424	53046	382	
33	33	DZK15_IMG_2223-2736.png	0.6900385	807	64004	179	
34	34	KBY15_IMG_9747-4104.png	0.9814419	10101	55053	63	
35	35	DZK15_IMG_3591-6156.png	0.68287426	2851	60037	13	
36	36	DZK15_IMG_3078-4446.png	0.7649514	14383	42314	319	
37	37	DZK15_IMG_4788-9234.png	0.8162588	14760	44131	4396	
38	38	KBY15_IMG_29583-12483.png	0.91509515	35691	23222	611	
39	39	DZKN15_IMG_6669-3249.png	0.6503667	266	64984	10	
40	40	DZK15_IMG_2736-11286.png	0.8635466	34329	20358	1981	
41	41	DZK15_IMG_3762-7182.png	0.8777625	37692	17346	3128	
42	42	DZKN15_IMG_5814-4788.png	0.7452055	136	65307	36	
43	43	DZK15_IMG_5301-2394.png	0.048	3	65414	20	
44	44	DZK15_IMG_2223-9576.png	0.9505527	7353	57418	386	
45	45	KBY15_IMG_12825-7695.png	0.72065806	20324	29456	7937	
46	46	DZK15_IMG_4788-8721.png	0.92031646	42162	16073	532	
47	47	DZK15_IMG_8550-4959.png	0.811904	7407	54697	71	
48	48	DZK15_IMG_4104-7353.png	0.7017914	5661	55064	1699	
49	49	DZK15_IMG_1368-6327.png	0.9439498	8429	56106	688	
50	50	DZKN15_IMG_6156-4104.png	0.9063035	34140	24337	2137	
51	51	DZK15_IMG_5814-3078.png	0.7602793	6860	54350	372	
52	52	KBY15_IMG_14877-22743.png	0.9498625	13811	50267	686	
53	53	DZK15_IMG_4959-2907.png	0.8670239	890	64373	1	

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative
54	54		KBY15_IMG_14193-3249.png	0.87994343	37391	17942	1137
55	55		KBY15_IMG_20178-22914.png	0.81716615	4608	58866	65
56	56		KBY15_IMG_8037-16416.png	0.89640707	34617	22918	1283
57	57		KBY15_IMG_19836-15903.png	0.006163328	2	64889	0
58	58		DZK15_IMG_3249-13509.png	0.9529063	19263	44369	389
59	59		KBY15_IMG_23256-18810.png	0.7438636	8046	51949	110
60	60		DZK15_IMG_4617-5301.png	0.76011556	789	64249	234
61	61		DZK15_IMG_3420-3249.png	0.9451344	12024	52116	422
62	62		DZK15_IMG_6840-4617.png	0.9682806	15889	48606	545
63	63		DZK15_IMG_1197-8208.png	0.959379	6365	58632	272
64	64		KBY15_IMG_20520-23085.png	0.907193	46451	9581	2574
65	65		DZK15_IMG_4446-2565.png	0.9266602	9091	55006	1042
66	66		KBY15_IMG_12483-21717.png	0.75052667	12470	44776	2434
67	67		KBY15_IMG_10602-3762.png	0.6003956	1821	61291	20
68	68		DZKN15_IMG_8379-4959.png	0.7557697	11216	47071	1497
69	69		DZKN15_IMG_7182-4275.png	0.9546248	10130	54443	511
70	70		KBY15_IMG_32661-24282.png	0.9677678	7251	57802	152
71	71		DZK15_IMG_3420-8892.png	0.86829346	40370	12919	4243
72	72		DZK15_IMG_4788-11628.png	0.3316913	101	65028	70
73	73		KBY15_IMG_30096-12654.png	0.9263749	5769	58850	7
74	74		DZK15_IMG_2736-14022.png	0.8923361	2905	61930	140
75	75		KBY15_IMG_27702-27189.png	0.83788717	19979	37826	558
76	76		KBY15_IMG_28557-24111.png	0.94032395	14599	49084	192
77	77		DZK15_IMG_3420-12483.png	0.88319224	34074	22449	2709
78	78		DZK15_IMG_3420-5814.png	0.048449174	107	61226	1
79	79		DZK15_IMG_2223-11457.png	0.8184812	25970	28047	3909
80	80		DZK15_IMG_3420-8721.png	0.92629266	2105	63096	178
81	81		DZK15_IMG_7182-3762.png	0.97604793	8802	56302	217

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		id	png	Dice_score	True_Positive	True_Negative	False_Neg
82	82		DZK15_IMG_4275-4446.png	0.94671005	22100	40948	250
83	83		KBY15_IMG_13509-22401.png	0.8759391	24659	33892	1483
84	84		DZK15_IMG_4788-11115.png	0.93402505	18454	44475	50
85	85		KBY15_IMG_7011-10431.png	0.868525	36267	18289	1187
86	86		DZKN15_IMG_1026-7011.png	0.71221095	3727	58797	1174
87	87		DZKN15_IMG_8550-4275.png	0.62857145	11	65512	9
88	88		DZK15_IMG_7695-2907.png	0.74139726	711	64329	458
89	89		DZK15_IMG_5130-11457.png	0.9569141	3287	61953	85
90	90		KBY15_IMG_14535-22914.png	0.81086195	1717	63018	13
91	91		DZK15_IMG_2394-10431.png	0.938586	6671	57992	586
92	92		KBY15_IMG_7524-17271.png	0.613274	16808	27530	236
93	93		KBY15_IMG_7695-15903.png	0.89946586	37635	19488	1837
94	94		KBY15_IMG_15048-2223.png	0.8957274	35031	22349	1528
95	95		DZK15_IMG_4275-4275.png	0.9184706	8528	55494	419
96	96		DZK15_IMG_6498-3420.png	0.86922467	34174	21079	2583
97	97		DZK15_IMG_4104-12996.png	0.73940974	7942	51996	169
98	98		DZK15_IMG_3591-4275.png	0.9779458	11640	53371	401
99	99		DZK15_IMG_2907-12825.png	0.9097226	7200	56907	41
100	100		DZK15_IMG_2565-5643.png	0.86694586	34667	20228	2419
101	101		DZK15_IMG_7011-5472.png	0.8657426	36443	17790	1284
102	102		DZK15_IMG_5301-3420.png	0.7561259	26923	21246	5519
103	103		KBY15_IMG_11970-3762.png	0.9647867	1685	63728	84
104	104		DZK15_IMG_2565-11115.png	0.93745995	7315	57245	119
105	105		DZK15_IMG_6156-3078.png	0.8175973	2416	62042	407
106	106		KBY15_IMG_30438-24111.png	0.7938578	8582	52497	122
107	107		DZK15_IMG_1539-12483.png	0.861835	2414	62348	453
108	108		KBY15_IMG_19836-16416.png	0.89855254	6984	56975	5
109	109		KBY15_IMG_13680-22401.png	0.45992607	2611	56793	199

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				Dice_score	True_Positive	True_Negative	False_Negative
110	110	DZK15_IMG_6156-1710.png		0.86780775	24667	33354	135
111	111	DZK15_IMG_4275-9918.png		0.8099769	3150	60908	403
112	112	KBY15_IMG_23085-9234.png		0.85387063	10065	52026	2708
113	113	DZK15_IMG_2907-10944.png		0.9465541	2019	63289	19
114	114	DZK15_IMG_2907-3762.png		nan	0	65530	2
115	115	DZK15_IMG_2394-11799.png		0.6954118	8806	49016	142
116	116	DZK15_IMG_2736-9747.png		0.8851913	1064	64196	267
117	117	DZK15_IMG_7353-6327.png		0.9288973	4174	60723	125
118	118	DZK15_IMG_5643-3933.png		0.89318585	27415	31564	2064
119	119	DZK15_IMG_3591-9405.png		0.9753276	17453	47200	378
120	120	DZK15_IMG_1368-10602.png		0.85718703	38804	13802	1132
121	121	DZK15_IMG_5472-4446.png		0.8590484	31363	23881	1056
122	122	DZK15_IMG_2565-5130.png		0.84508926	34835	17930	1076
123	123	KBY15_IMG_22743-9576.png		0.9204956	10698	52990	105
124	124	DZK15_IMG_4104-9405.png		0.43524906	1420	60431	68
125	125	KBY15_IMG_10773-3420.png		0.81244767	6788	55614	435
126	126	DZK15_IMG_8721-4446.png		0.8823661	3938	60548	97
127	127	KBY15_IMG_13680-20520.png		nan	0	65515	0
128	128	KBY15_IMG_20007-23598.png		0.90290105	31839	26849	1390
129	129	KBY15_IMG_10773-2907.png		0.96947354	3287	62042	101
130	130	DZK15_IMG_5301-1368.png		0.88648444	2417	62500	615
131	131	KBY15_IMG_7011-16245.png		0.9282414	3415	61593	37
132	132	DZK15_IMG_4788-4446.png		0.033873875	47	62808	2
133	133	DZKN15_IMG_6840-4617.png		0.8900594	31768	25920	1226
134	134	DZK15_IMG_5985-8550.png		0.9299075	6985	57498	748
135	135	KBY15_IMG_7011-9918.png		0.84896666	24668	32091	1869
136	136	DZK15_IMG_4104-1710.png		0.71593404	5057	56466	3455
137	137	DZK15_IMG_7353-6156.png		0.8860117	35961	20322	1866

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		id	png	Dice_score	True_Positive	True_Negative	False_Neg
138	138		DZK15_IMG_1881-6156.png	0.9277599	2164	63035	291
139	139		DZK15_IMG_6840-9063.png	0.2930722	404	63183	87
140	140		DZKN15_IMG_2565-6498.png	0.7372189	6590	54248	832
141	141		DZK15_IMG_7011-7353.png	0.48024315	395	64286	837
142	142		DZK15_IMG_5472-3420.png	0.67329675	12017	41857	668
143	143		DZK15_IMG_5814-5814.png	0.79799247	954	64099	8
144	144		DZKN15_IMG_6840-2736.png	0.8124176	23435	31279	1761
145	145		DZK15_IMG_6156-4446.png	0.9345307	6452	58180	45
146	146		DZKN15_IMG_2052-4275.png	0.9772562	8744	56385	20
147	147		KBY15_IMG_3591-14877.png	0.4624682	1454	60702	338
148	148		DZK15_IMG_4275-2565.png	0.8477246	27234	28518	3617
149	149		DZKN15_IMG_1881-5472.png	0.7761696	18448	36448	7172
150	150		KBY15_IMG_3078-16929.png	0.85805297	35556	18216	1330
151	151		KBY15_IMG_3249-14706.png	0.79891014	8357	52972	254
152	152		DZK15_IMG_4617-10260.png	0.8755833	19515	40475	1031
153	153		DZK15_IMG_2394-4959.png	0.9080623	7383	56658	64
154	154		KBY15_IMG_14877-3420.png	0.70102346	4829	56588	284
155	155		KBY15_IMG_23256-18468.png	0.8581687	28444	27690	3126
156	156		DZK15_IMG_3249-11115.png	0.93083626	5020	59770	21
157	157		DZK15_IMG_3762-4959.png	0.92045313	3616	61295	81
158	158		DZK15_IMG_5472-2907.png	0.8844392	33503	23278	1898
159	159		KBY15_IMG_7353-16929.png	0.8999289	13287	49294	423
160	160		DZK15_IMG_3591-11799.png	0.926618	34542	25523	1745
161	161		KBY15_IMG_6669-16587.png	nan	0	63497	11
162	162		KBY15_IMG_19836-16074.png	0.8886512	4984	59303	24
163	163		DZK15_IMG_7524-3762.png	0.83922476	35636	16246	2720
164	164		DZKN15_IMG_8721-5130.png	0.72681886	4076	58396	420
165	165		KBY15_IMG_14877-2394.png	0.5691057	455	64392	140

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative
166	166	KBY15_IMG_12996-7353.png	0.92819905	6677	57826	144	
167	167	KBY15_IMG_14706-23085.png	0.96826243	5461	59717	34	
168	168	KBY15_IMG_28044-13167.png	0.85298747	19765	38958	4793	
169	169	DZK15_IMG_1881-7011.png	0.86612165	35650	18865	4916	
170	170	DZK15_IMG_3933-12654.png	0.92284316	34016	25832	1909	
171	171	KBY15_IMG_17955-24453.png	0.9085217	10592	52811	437	
172	172	DZKN15_IMG_6840-3933.png	0.90689105	1724	63458	2	
173	173	DZK15_IMG_5643-11970.png	0.69042116	3139	59582	27	
174	174	DZK15_IMG_7353-1710.png	0.81355274	4178	59443	168	
175	175	DZK15_IMG_4617-1710.png	0.94175106	5206	59686	123	
176	176	KBY15_IMG_28215-22059.png	0.7318885	4829	57169	0	
177	177	DZK15_IMG_6669-5814.png	0.8854353	10426	52412	283	
178	178	DZK15_IMG_5472-10944.png	0.9498681	3960	61158	126	
179	179	DZK15_IMG_6156-4104.png	0.85687417	24142	33329	3383	
180	180	KBY15_IMG_27018-15903.png	0.92026556	6723	57648	641	
181	181	KBY15_IMG_15048-2736.png	0.7619949	2414	61614	0	
182	182	KBY15_IMG_7695-10089.png	0.79810435	28630	22421	1709	
183	183	KBY15_IMG_12825-21546.png	0.8548864	39727	12322	5864	
184	184	KBY15_IMG_19665-15903.png	0.8692109	18130	41950	2263	
185	185	DZK15_IMG_3762-9918.png	0.9480783	7240	57503	57	
186	186	DZKN15_IMG_1881-5814.png	0.93895197	6406	58297	364	
187	187	DZK15_IMG_5814-1368.png	0.79804087	28107	23203	750	
188	188	KBY15_IMG_10431-4617.png	0.7986018	23076	30821	3339	
189	189	KBY15_IMG_11286-4617.png	0.5859546	4685	54230	644	
190	190	DZK15_IMG_3249-7866.png	0.95434546	10410	54130	592	
191	191	DZK15_IMG_4788-9918.png	0.8032851	8216	53296	1017	
192	192	DZK15_IMG_1710-4788.png	0.8340697	26239	28857	2361	
193	193	DZKN15_IMG_5130-3249.png	0.42130944	1036	61654	0	

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		id	png	Dice_score	True_Positive	True_Negative	False_Neg
194	194	KBY15_IMG_16416-4446.png	0.85714287	189	65284	3	
195	195	DZK15_IMG_4959-1710.png	0.7433683	29004	16506	807	
196	196	DZK15_IMG_4788-5643.png	0.9384726	22132	40502	79	
197	197	DZK15_IMG_1710-2907.png	0.75874937	17084	37588	4432	
198	198	DZK15_IMG_5814-6840.png	0.96638584	11011	53759	6	
199	199	DZK15_IMG_2907-10431.png	0.75048524	14499	41396	4652	
200	200	KBY15_IMG_10602-3078.png	0.9383421	12814	51038	255	
201	201	DZK15_IMG_2907-7182.png	0.89041805	25945	33205	2116	
202	202	DZK15_IMG_1881-5301.png	0.9710068	1842	63584	58	
203	203	DZKN15_IMG_4788-3249.png	0.87396955	6255	57477	14	
204	204	DZK15_IMG_3078-10089.png	0.77310145	25074	25744	1814	
205	205	DZKN15_IMG_7866-5301.png	0.7883503	25282	26679	2869	
206	206	DZK15_IMG_3591-7353.png	0.92159396	7840	56362	307	
207	207	KBY15_IMG_27873-13167.png	0.7781372	22373	30405	10970	
208	208	DZK15_IMG_7524-4104.png	0.7657707	1396	63286	180	
209	209	KBY15_IMG_28557-22914.png	0.89231956	17311	44047	977	
210	210	DZK15_IMG_5643-9747.png	0.9200793	47598	9669	1543	
211	211	DZK15_IMG_3762-14022.png	0.8968143	17904	43512	2378	
212	212	DZK15_IMG_5814-3933.png	0.84810305	18442	40488	459	
213	213	DZK15_IMG_6327-1881.png	0.87489814	27911	29643	2552	
214	214	DZK15_IMG_2907-3933.png	0.9835097	8320	56937	54	
215	215	KBY15_IMG_12825-21204.png	0.98800373	13054	52165	119	
216	216	DZKN15_IMG_855-6840.png	0.919492	34429	25078	2276	
217	217	DZK15_IMG_4446-3078.png	0.0014245015	2	62730	108	
218	218	KBY15_IMG_7182-16587.png	0.83116883	192	65266	65	
219	219	DZK15_IMG_4275-9234.png	0.91753983	2014	63160	71	
220	220	DZK15_IMG_6327-2907.png	0.9476103	1031	64391	34	
221	221	KBY15_IMG_30267-12825.png	0.88303065	33496	23166	495	

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				Dice_score	True_Positive	True_Negative	False_Negative
222	222	DZK15_IMG_2565-3762.png		0.843269	33065	20180	3537
223	223	DZK15_IMG_7011-5985.png		0.92825425	4703	60106	66
224	224	KBY15_IMG_10944-4959.png		0.64186835	9853	44688	1085
225	225	DZK15_IMG_4446-4617.png		0.91063887	42036	15250	1196
226	226	KBY15_IMG_29241-23769.png		0.9355501	6612	58013	306
227	227	DZK15_IMG_3933-2052.png		0.8306887	37457	12810	1139
228	228	KBY15_IMG_15219-2052.png		0.91299075	8662	55223	161
229	229	KBY15_IMG_6840-16416.png		0.9340278	538	64922	72
230	230	DZK15_IMG_5814-2394.png		0.46579328	1440	60793	1670
231	231	DZK15_IMG_2052-7011.png		0.8868227	1383	63800	118
232	232	DZKN15_IMG_2736-6498.png		0.86679035	32691	22797	1249
233	233	DZK15_IMG_4959-11628.png		0.917969	30897	29117	2078
234	234	KBY15_IMG_27873-12996.png		0.90666765	37109	20787	1822
235	235	DZK15_IMG_5985-6669.png		0.9456812	4248	60800	434
236	236	KBY15_IMG_28728-11970.png		0.82186043	21986	34019	4011
237	237	DZK15_IMG_2052-3420.png		0.7827626	27192	23251	679
238	238	KBY15_IMG_29241-22914.png		0.913143	6781	57465	550
239	239	DZK15_IMG_2052-13338.png		0.8510217	33923	19736	534
240	240	DZK15_IMG_1539-7524.png		0.87866235	14215	47395	1149
241	241	DZK15_IMG_3591-13509.png		0.8797215	13648	48156	514
242	242	DZK15_IMG_3762-10260.png		0.7616266	3390	60024	1633
243	243	DZK15_IMG_5643-11115.png		0.8334033	31726	21126	157
244	244	DZK15_IMG_4104-2052.png		0.36363637	2	65527	4
245	245	DZK15_IMG_1881-12996.png		0.9791042	10121	54983	290
246	246	KBY15_IMG_27702-11457.png		0.9528464	3607	61572	164
247	247	DZK15_IMG_3078-9576.png		0.84327006	33493	19593	1433
248	248	DZK15_IMG_3591-8379.png		0.8340737	24596	31154	2569
249	249	DZK15_IMG_2565-4788.png		0.9168706	6557	57790	1089

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		id	png	Dice_score	True_Positive	True_Negative	False_Neg
250	250	DZK15_IMG_6840-7353.png	0.93268293	2868	62254	34	
251	251	KBY15_IMG_15732-2907.png	0.8431796	37672	13851	409	
252	252	DZKN15_IMG_7011-4104.png	0.8976549	6622	57404	822	
253	253	DZKN15_IMG_5814-513.png	0.52628106	4791	52120	8	
254	254	KBY15_IMG_2565-17613.png	0.9654968	3246	62058	173	
255	255	DZK15_IMG_7011-8721.png	0.8337534	4135	59752	822	
256	256	DZKN15_IMG_7695-3420.png	0.82185405	33214	17923	922	
257	257	DZK15_IMG_2565-10089.png	0.92485815	4074	60800	295	
258	258	DZK15_IMG_6327-7866.png	0.8196739	29614	22892	372	
259	259	DZKN15_IMG_4788-4959.png	0.5986885	913	63399	147	
260	260	DZK15_IMG_5301-1881.png	0.94958556	5613	59327	259	
261	261	KBY15_IMG_23769-19323.png	0.96720666	1224	64229	30	
262	262	DZKN15_IMG_5301-684.png	0.4045697	1328	60299	104	
263	263	DZK15_IMG_3249-12825.png	0.9095188	20486	40974	760	
264	264	DZK15_IMG_4788-5814.png	0.85001796	9476	52716	1991	
265	265	DZK15_IMG_4446-2736.png	0.84382135	24378	32134	323	
266	266	DZK15_IMG_7524-4275.png	0.8497416	21781	36052	1273	
267	267	KBY15_IMG_14877-2565.png	0.87857604	31417	25435	4108	
268	268	DZK15_IMG_2223-11628.png	0.6193753	14625	32936	204	
269	269	KBY15_IMG_15561-2565.png	0.8762875	40155	14043	695	
270	270	DZK15_IMG_4275-11286.png	0.87978584	13638	48171	778	
271	271	DZK15_IMG_2223-14022.png	0.94778526	5146	59823	385	
272	272	KBY15_IMG_19836-22743.png	0.9629812	5840	59247	0	
273	273	DZKN15_IMG_1710-5985.png	0.807839	9852	50997	1104	
274	274	KBY15_IMG_2907-14706.png	0.76102626	27927	20070	1130	
275	275	DZKN15_IMG_1710-4788.png	0.8708785	16059	44715	1594	
276	276	DZK15_IMG_4959-12483.png	0.8132992	159	65304	7	
277	277	DZK15_IMG_4617-9576.png	0.87132293	20971	38371	411	

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				Dice_score	True_Positive	True_Negative	False_Negative
278	278	KBY15_IMG_9405-5301.png		0.9608768	6926	58046	354
279	279	DZKN15_IMG_5814-855.png		0.946282	1788	63545	17
280	280	DZK15_IMG_5643-2052.png		0.9085742	8313	55550	16
281	281	DZK15_IMG_5130-11970.png		0.850815	32807	21224	620
282	282	DZK15_IMG_4446-5130.png		0.5547144	1209	62386	43
283	283	DZKN15_IMG_5985-2907.png		0.8716196	35179	19994	2457
284	284	KBY15_IMG_29070-11970.png		0.96447396	2837	62490	137
285	285	DZKN15_IMG_5985-1368.png		0.83875585	28732	25757	1402
286	286	DZK15_IMG_1881-10944.png		0.8991381	5946	58256	1184
287	287	KBY15_IMG_29412-22914.png		0.76360327	2098	62139	263
288	288	DZK15_IMG_6498-5643.png		0.8580378	24654	32724	160
289	289	DZKN15_IMG_7011-4275.png		0.9618768	2460	62881	116
290	290	DZK15_IMG_1881-13338.png		0.9299137	7324	57108	345
291	291	KBY15_IMG_7524-8550.png		0.8289115	30821	21992	3288
292	292	DZK15_IMG_2565-14193.png		0.96029323	786	64685	22
293	293	KBY15_IMG_13851-22401.png		0.59195405	309	64801	410
294	294	DZK15_IMG_2736-9576.png		0.9204476	14353	48702	87
295	295	DZK15_IMG_1539-10944.png		0.5575349	10657	37964	698
296	296	KBY15_IMG_17955-24624.png		0.8539032	26772	29603	3836
297	297	DZKN15_IMG_6669-3420.png		0.96506244	8342	56590	247
298	298	KBY15_IMG_14364-22743.png		0.9579674	5618	59425	152
299	299	DZK15_IMG_4617-8721.png		0.94084376	1996	63289	5
300	300	KBY15_IMG_30951-21717.png		0.8719177	4367	59886	6
301	301	DZK15_IMG_2736-5130.png		0.92601275	5726	58895	98
302	302	KBY15_IMG_31806-22230.png		0.96439546	20247	43794	452
303	303	DZK15_IMG_7353-5301.png		0.8457752	25945	30129	3208
304	304	DZK15_IMG_7182-5130.png		0.90044695	3324	61477	46
305	305	DZK15_IMG_2223-4275.png		0.88805896	9155	54073	522

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		id	png	Dice_score	True_Positive	True_Negative	False_Neg
306	306		DZK15_IMG_6840-3249.png	0.80385345	3588	60197	1688
307	307		DZK15_IMG_9234-4446.png	0.94142604	4661	60295	169
308	308		DZK15_IMG_2223-6669.png	0.89002454	4354	60106	206
309	309		KBY15_IMG_3933-13167.png	0.9424535	2735	62467	6
310	310		KBY15_IMG_6669-9918.png	0.8414201	2844	61620	404
311	311		DZKN15_IMG_8721-4788.png	0.13805947	1112	50539	9254
312	312		DZK15_IMG_8208-3078.png	0.8101856	8686	52780	645
313	313		DZK15_IMG_5472-9234.png	0.97539586	16571	48129	337
314	314		KBY15_IMG_11970-4446.png	0.85611683	29679	25881	1226
315	315		KBY15_IMG_16074-21717.png	0.47471946	1798	59759	163
316	316		DZK15_IMG_5643-1710.png	0.87547284	20019	39822	508
317	317		DZK15_IMG_5643-2736.png	0.512954	2267	58964	1959
318	318		KBY15_IMG_15390-22743.png	0.66100496	1401	62698	2
319	319		DZK15_IMG_4104-13680.png	0.88832146	9219	53999	626
320	320		DZKN15_IMG_4617-4617.png	0.8856209	1355	63831	215
321	321		KBY15_IMG_3762-13509.png	0.9817744	6114	59195	129
322	322		DZK15_IMG_7695-5301.png	0.64107394	2722	59766	1996
323	323		KBY15_IMG_14877-22572.png	0.9199392	28778	31749	1218
324	324		DZKN15_IMG_6156-1539.png	0.86771756	33221	22186	1334
325	325		KBY15_IMG_3078-17613.png	0.81027675	23701	30736	1848
326	326		KBY15_IMG_12654-21204.png	0.9195044	5009	59650	1
327	327		DZK15_IMG_6669-3420.png	0.9357257	15228	48216	1
328	328		DZK15_IMG_3249-10602.png	0.95071656	1360	64035	46
329	329		DZK15_IMG_5130-6840.png	0.93936026	17311	45990	685
330	330		DZKN15_IMG_6840-5472.png	0.7641991	8914	51121	719
331	331		KBY15_IMG_10773-10773.png	0.791587	11799	47524	225
332	332		DZK15_IMG_4788-3933.png	0.8331402	4314	59494	11
333	333		DZKN15_IMG_8892-5130.png	0.76354766	15027	41202	4260

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative
334	334	KBY15_IMG_15390-2736.png	0.8595984	29455	26459	1832	
335	335	DZK15_IMG_4104-10602.png	0.9041938	37666	19888	3210	
336	336	DZK15_IMG_3420-6327.png	0.76460034	20882	31796	3627	
337	337	KBY15_IMG_7353-16074.png	0.9070882	6053	58243	77	
338	338	KBY15_IMG_9918-13338.png	0.9577242	4848	60260	268	
339	339	DZK15_IMG_2736-7524.png	0.9322709	5148	59640	124	
340	340	KBY15_IMG_13509-22572.png	0.956918	3465	61759	158	
341	341	KBY15_IMG_29241-12825.png	0.7276959	14384	40387	3640	
342	342	DZK15_IMG_7011-5643.png	0.9511036	4503	60570	181	
343	343	DZK15_IMG_6669-4104.png	0.88554573	4503	59869	14	
344	344	DZK15_IMG_5643-5814.png	0.84914815	20909	37198	1478	
345	345	KBY15_IMG_9918-3762.png	0.90814406	36096	22138	1130	
346	346	DZK15_IMG_6840-3762.png	nan	0	64407	2	
347	347	DZK15_IMG_1710-6498.png	0.90845776	2739	62245	103	
348	348	DZK15_IMG_8379-2907.png	0.91101253	4827	59766	2	
349	349	DZK15_IMG_7866-2223.png	0.7771782	29668	18856	921	
350	350	KBY15_IMG_7353-17100.png	0.8746388	29359	27761	1107	
351	351	DZKN15_IMG_0-6669.png	0.82822853	6936	55723	3	
352	352	KBY15_IMG_15048-3591.png	nan	0	65479	4	
353	353	DZK15_IMG_4788-10773.png	0.9287938	6861	57623	72	
354	354	KBY15_IMG_28044-12312.png	0.94239503	6642	58082	190	
355	355	DZK15_IMG_3933-6840.png	0.93043876	6086	58540	429	
356	356	DZK15_IMG_3249-13680.png	0.89794487	6401	57680	570	
357	357	DZK15_IMG_5472-9405.png	0.96002907	10556	54101	183	
358	358	KBY15_IMG_12825-21888.png	0.9527232	1723	63642	85	
359	359	DZK15_IMG_4959-6156.png	0.87740874	1070	64167	212	
360	360	DZK15_IMG_4788-7182.png	0.64935064	800	63872	0	
361	361	DZK15_IMG_2052-12654.png	0.48055637	3386	54830	135	

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		id	png	Dice_score	True_Positive	True_Negative	False_Neg
362	362	362	DZKN15_IMG_1197-5814.png	nan	0	65338	192
363	363	363	DZK15_IMG_1710-13338.png	0.90281	3502	61280	485
364	364	364	DZKN15_IMG_855-7011.png	0.4182926	3055	53984	7294
365	365	365	KBY15_IMG_30438-23940.png	0.9215292	229	65268	25
366	366	366	DZKN15_IMG_5814-1881.png	0.8789174	15621	45611	8
367	367	367	DZK15_IMG_2736-9918.png	0.75785094	21116	30926	1139
368	368	368	DZK15_IMG_1368-9918.png	0.9535017	21634	41792	380
369	369	369	DZK15_IMG_4959-11457.png	0.57916504	770	63647	990
370	370	370	DZK15_IMG_3762-6669.png	0.70257306	20069	28475	1782
371	371	371	DZK15_IMG_4959-8892.png	0.93891674	15056	48521	50
372	372	372	DZK15_IMG_8208-6327.png	0.87288284	29479	27471	2838
373	373	373	DZKN15_IMG_4788-4104.png	0.89127743	4685	59708	532
374	374	374	DZKN15_IMG_7182-4104.png	0.9375107	2738	62433	15
375	375	375	DZKN15_IMG_5814-1710.png	0.9496599	2792	62448	22
376	376	376	KBY15_IMG_29070-12483.png	0.64862317	13792	36801	1524
377	377	377	KBY15_IMG_17955-25650.png	0.59600973	3540	57197	90
378	378	378	DZK15_IMG_6327-6327.png	0.7555555	34	65480	19
379	379	379	DZK15_IMG_6327-5472.png	0.8270547	9550	51992	2180
380	380	380	KBY15_IMG_20349-15561.png	0.69841886	16101	35530	709
381	381	381	DZK15_IMG_8379-1026.png	0.9118598	3383	61499	304
382	382	382	DZKN15_IMG_2223-6156.png	0.8784034	3081	61602	134
383	383	383	DZK15_IMG_4959-8379.png	0.8440701	29959	24508	1277
384	384	384	DZK15_IMG_2052-4275.png	0.83701366	32428	20479	725
385	385	385	DZK15_IMG_1710-12312.png	0.9168033	6711	57607	36
386	386	386	DZK15_IMG_6498-7524.png	0.83027405	4772	58813	418
387	387	387	DZK15_IMG_5643-11799.png	0.58713454	753	63724	458
388	388	388	DZK15_IMG_3249-3591.png	0.86895823	32055	23813	1274
389	389	389	DZK15_IMG_3591-11286.png	0.87057763	33650	21881	455

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative
390	390	KBY15_IMG_12825-10602.png	0.7666667	23	65499	10	
391	391	DZKN15_IMG_5985-4617.png	0.9325268	29217	32091	1457	
392	392	DZK15_IMG_3933-13851.png	0.8481843	2651	61936	536	
393	393	DZK15_IMG_3420-13167.png	0.88089937	3957	60509	389	
394	394	KBY15_IMG_14364-3420.png	0.9633603	6376	58675	54	
395	395	DZKN15_IMG_5814-2907.png	0.9140277	7894	56157	376	
396	396	KBY15_IMG_29070-12996.png	0.71473354	1938	62051	537	
397	397	DZK15_IMG_3762-4617.png	0.8701443	392	65027	13	
398	398	KBY15_IMG_7524-9063.png	0.8569221	18297	41129	550	
399	399	DZK15_IMG_2565-13680.png	0.95499724	6101	58860	0	
400	400	KBY15_IMG_32490-23256.png	0.9332779	3371	61683	122	
401	401	DZKN15_IMG_7695-4788.png	0.8895489	37136	19178	993	
402	402	DZK15_IMG_3591-6498.png	0.8880014	30684	27112	1080	
403	403	DZK15_IMG_4617-4446.png	0.81899345	26096	27905	1246	
404	404	DZK15_IMG_5814-8892.png	0.9577473	16717	47344	219	
405	405	DZKN15_IMG_7524-3591.png	0.0033485366	29	48244	55	
406	406	KBY15_IMG_28386-22059.png	0.9290218	23645	38278	78	
407	407	KBY15_IMG_22914-9405.png	0.88019407	34835	21218	1747	
408	408	DZKN15_IMG_8892-4788.png	0.81650376	23599	31330	5596	
409	409	KBY15_IMG_27360-27189.png	0.9526419	16686	47191	685	
410	410	KBY15_IMG_31977-22230.png	0.82263434	1730	63060	145	
411	411	DZK15_IMG_5130-5130.png	0.7631444	18557	35460	1413	
412	412	DZK15_IMG_7182-4788.png	0.75774974	9631	49747	154	
413	413	KBY15_IMG_24624-17955.png	0.659082	840	63827	22	
414	414	KBY15_IMG_13338-21888.png	0.91848564	36902	22084	1111	
415	415	KBY15_IMG_12996-21375.png	0.8460304	26636	29205	3721	
416	416	DZKN15_IMG_4617-5472.png	0.76301754	17665	36898	645	
417	417	DZK15_IMG_7011-7695.png	0.68137896	2856	60009	209	

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		id	png	Dice_score	True_Positive	True_Negative	False_Neg
418	418		DZK15_IMG_4959-8550.png	0.874335	30979	25652	1455
419	419		DZKN15_IMG_6498-3762.png	0.95227623	18627	45042	1036
420	420		DZK15_IMG_1710-7866.png	0.85294807	18242	41004	0
421	421		KBY15_IMG_28728-11457.png	0.93366915	2780	62361	177
422	422		KBY15_IMG_12483-21033.png	0.98280096	6800	58498	110
423	423		DZKN15_IMG_6840-5814.png	0.9328333	5597	59133	49
424	424		DZK15_IMG_1881-7353.png	0.96557915	1613	63808	64
425	425		KBY15_IMG_11115-10773.png	0.8758969	16480	44386	31
426	426		DZK15_IMG_4446-12825.png	0.1142857	72	64348	52
427	427		KBY15_IMG_11115-4446.png	0.96983796	15209	49381	97
428	428		DZK15_IMG_7524-1026.png	0.7864976	2295	61995	752
429	429		DZK15_IMG_6327-4788.png	0.98463774	4070	61339	20
430	430		KBY15_IMG_7866-16758.png	nan	0	64322	11
431	431		DZK15_IMG_3420-2223.png	0.7835403	26363	24607	727
432	432		DZK15_IMG_2052-8721.png	0.85962313	12477	48984	2302
433	433		DZKN15_IMG_6327-3591.png	0.36086178	402	63710	0
434	434		DZK15_IMG_5301-7524.png	0.7928175	14482	43485	1548

[All dataset] EfficientNet B2 U-Net (No ImageNet)

	id	png	Dice_score	True_Positive	True_Negative	False_Negative
0	0	DZK15_IMG_7695-3762.png	nan	0	65501	33
1	1	DZKN15_IMG_6840-2907.png	0.9182319	8922	55025	1211
2	2	DZK15_IMG_6840-3078.png	0.97184575	466	65043	12
3	3	DZK15_IMG_7524-3249.png	0.86189485	34306	20236	1605
4	4	KBY15_IMG_29925-23256.png	0.8604987	6557	56853	774
5	5	KBY15_IMG_3078-14535.png	0.041965764	38	63763	11
6	6	DZK15_IMG_8037-4104.png	0.89023364	13240	49031	470
7	7	DZK15_IMG_3249-8208.png	0.83642066	29846	24016	4263
8	8	DZKN15_IMG_5985-3762.png	0.8099081	14403	44372	299
9	9	KBY15_IMG_11286-9747.png	0.8250896	19692	37495	6305
10	10	DZKN15_IMG_4617-5643.png	0.90229887	1099	64199	112
11	11	DZK15_IMG_1197-9918.png	0.9365944	6529	58123	303
12	12	DZK15_IMG_4446-7182.png	0.82662773	27747	26150	1110
13	13	DZK15_IMG_3591-9918.png	0.9027843	35019	22975	1563
14	14	DZK15_IMG_2736-10260.png	nan	0	64572	11
15	15	KBY15_IMG_3933-13509.png	0.9504044	12044	52235	402
16	16	DZK15_IMG_7524-5985.png	0.79469097	8562	52550	142
17	17	DZK15_IMG_5985-10773.png	0.93647903	34970	25822	1332
18	18	DZK15_IMG_3933-8721.png	0.9367388	5153	59687	119
19	19	DZKN15_IMG_5643-684.png	0.95868987	3249	62007	121
20	20	KBY15_IMG_19836-15732.png	0.88161045	37334	18175	747
21	21	DZK15_IMG_7866-3078.png	0.9414346	19949	43105	750
22	22	DZK15_IMG_7524-7182.png	0.77363014	2259	61955	788
23	23	DZK15_IMG_2394-13680.png	0.9551922	7184	57678	96
24	24	DZKN15_IMG_7866-4788.png	0.91613084	6696	57614	125
25	25	DZK15_IMG_7353-1539.png	0.90813255	603	64811	33

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		id	png	Dice_score	True_Positive	True_Negative	False_Neg
26	26	KBY15_IMG_30780-24282.png	0.49066827	815	63029	245	
27	27	DZK15_IMG_7182-7866.png	0.9278776	4728	60073	41	
28	28	KBY15_IMG_4104-13167.png	0.9762795	8746	56365	18	
29	29	KBY15_IMG_7182-9918.png	0.9075337	8318	55523	11	
30	30	KBY15_IMG_7524-9405.png	0.89612424	31734	26445	1595	
31	31	DZK15_IMG_3420-12312.png	0.42573246	1039	61694	934	
32	32	DZK15_IMG_3933-10602.png	0.8892194	36767	19608	1589	
33	33	DZK15_IMG_2223-2736.png	0.9279361	7198	57220	43	
34	34	KBY15_IMG_9747-4104.png	0.85079503	24987	31785	1550	
35	35	DZK15_IMG_3591-6156.png	0.86542445	209	65262	48	
36	36	DZK15_IMG_3078-4446.png	0.87189764	3917	60468	0	
37	37	DZK15_IMG_4788-9234.png	0.71131825	11523	44660	1190	
38	38	KBY15_IMG_29583-12483.png	0.89734036	29151	29715	1754	
39	39	DZKN15_IMG_6669-3249.png	0.82685727	3990	59875	967	
40	40	DZK15_IMG_2736-11286.png	0.95772725	4214	60950	155	
41	41	DZK15_IMG_3762-7182.png	0.9139407	14305	48537	51	
42	42	DZKN15_IMG_5814-4788.png	0.90909094	1120	64192	211	
43	43	DZK15_IMG_5301-2394.png	0.6510557	848	63779	14	
44	44	DZK15_IMG_2223-9576.png	0.73076206	3884	58790	922	
45	45	KBY15_IMG_12825-7695.png	0.7537369	22187	28851	4228	
46	46	DZK15_IMG_4788-8721.png	0.5	2	65530	4	
47	47	DZK15_IMG_8550-4959.png	0.9406836	5614	59214	32	
48	48	DZK15_IMG_4104-7353.png	0.873126	16482	44264	29	
49	49	DZK15_IMG_1368-6327.png	0.92938566	6278	58304	219	
50	50	DZKN15_IMG_6156-4104.png	0.96711665	1397	64044	9	
51	51	DZK15_IMG_5814-3078.png	0.57877946	9797	41479	1558	
52	52	KBY15_IMG_14877-22743.png	0.917597	1726	63500	0	
53	53	DZK15_IMG_4959-2907.png	0.88847554	10747	52091	720	

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative
54	54		KBY15_IMG_14193-3249.png	0.88570875	4580	59774	93
55	55		KBY15_IMG_20178-22914.png	0.95632094	2485	62824	63
56	56		KBY15_IMG_8037-16416.png	0.005197119	35	52102	10331
57	57		KBY15_IMG_19836-15903.png	0.94965404	1990	63335	11
58	58		DZK15_IMG_3249-13509.png	0.9057451	6054	58222	76
59	59		KBY15_IMG_23256-18810.png	0.8050578	24735	28822	3416
60	60		DZK15_IMG_4617-5301.png	0.8505458	33190	20682	946
61	61		DZK15_IMG_3420-3249.png	0.8589926	2720	61923	467
62	62		DZK15_IMG_6840-4617.png	0.8190397	3949	59842	1074
63	63		DZK15_IMG_1197-8208.png	0.8877183	28229	30166	3341
64	64		KBY15_IMG_20520-23085.png	0.53571427	165	65085	7
65	65		DZK15_IMG_4446-2565.png	0.43585002	1296	60885	136
66	66		KBY15_IMG_12483-21717.png	0.9592885	2804	62494	153
67	67		KBY15_IMG_10602-3762.png	0.97221476	7313	57805	90
68	68		DZKN15_IMG_8379-4959.png	0.66263235	1971	61558	839
69	69		DZKN15_IMG_7182-4275.png	0.92369825	2173	63004	9
70	70		KBY15_IMG_32661-24282.png	0.9757123	17415	47254	416
71	71		DZK15_IMG_3420-8892.png	0.9216722	2877	62170	168
72	72		DZK15_IMG_4788-11628.png	0.8370091	21784	35268	603
73	73		KBY15_IMG_30096-12654.png	0.89425313	34638	22706	2119
74	74		DZK15_IMG_2736-14022.png	0.8769597	39044	15536	5569
75	75		KBY15_IMG_27702-27189.png	0.81186754	24792	29254	6059
76	76		KBY15_IMG_28557-24111.png	0.87143755	9066	53795	779
77	77		DZK15_IMG_3420-12483.png	0.94321793	5490	59385	5
78	78		DZK15_IMG_3420-5814.png	0.6510716	13777	36992	3033
79	79		DZK15_IMG_2223-11457.png	0.9625135	4442	60748	242
80	80		DZK15_IMG_3420-8721.png	0.91596276	10627	52959	176
81	81		DZK15_IMG_7182-3762.png	0.8218139	21218	35117	1836

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		id	png	Dice_score	True_Positive	True_Negative	False_Neg
82	82		DZK15_IMG_4275-4446.png	0.33259988	1436	58337	52
83	83		KBY15_IMG_13509-22401.png	0.81615525	9043	52419	590
84	84		DZK15_IMG_4788-11115.png	0.9011858	18240	43296	2
85	85		KBY15_IMG_7011-10431.png	0.9142925	3835	60982	200
86	86		DZKN15_IMG_1026-7011.png	0.7691945	27746	21139	1311
87	87		DZKN15_IMG_8550-4275.png	0.9666184	13682	50909	35
88	88		DZK15_IMG_7695-2907.png	0.9513151	18446	45202	58
89	89		DZK15_IMG_5130-11457.png	0.8308497	5715	57494	157
90	90		KBY15_IMG_14535-22914.png	0.8780124	32443	24078	2112
91	91		DZK15_IMG_2394-10431.png	0.89477897	5030	59323	11
92	92		KBY15_IMG_7524-17271.png	0.8716602	24386	33969	1670
93	93		KBY15_IMG_7695-15903.png	0.9695994	10238	54656	173
94	94		KBY15_IMG_15048-2223.png	0.59474534	2773	58984	292
95	95		DZK15_IMG_4275-4275.png	0.8570702	3373	61038	180
96	96		DZK15_IMG_6498-3420.png	0.91393226	1699	63517	31
97	97		DZK15_IMG_4104-12996.png	0.92659795	5081	59650	248
98	98		DZK15_IMG_3591-4275.png	0.81773764	24268	30450	4927
99	99		DZK15_IMG_2907-12825.png	0.94684565	6101	58750	0
100	100		DZK15_IMG_2565-5643.png	0.895887	3997	60610	721
101	101		DZK15_IMG_7011-5472.png	0.7186626	16572	35989	4944
102	102		DZK15_IMG_5301-3420.png	0.7779851	417	64881	74
103	103		KBY15_IMG_11970-3762.png	0.9607765	4850	60290	266
104	104		DZK15_IMG_2565-11115.png	0.8588431	8804	53838	527
105	105		DZK15_IMG_6156-3078.png	0.841917	19061	39317	5497
106	106		KBY15_IMG_30438-24111.png	0.932578	16792	46316	144
107	107		DZK15_IMG_1539-12483.png	0.81871647	4803	58606	310
108	108		KBY15_IMG_19836-16416.png	0.9624465	3934	61295	152
109	109		KBY15_IMG_13680-22401.png	0.90964156	1802	63376	3

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				Dice_score	True_Positive	True_Negative	False_Negative
110	110	DZK15_IMG_6156-1710.png		0.8651985	38266	15346	1670
111	111	DZK15_IMG_4275-9918.png		0.8984394	27720	31549	1759
112	112	KBY15_IMG_23085-9234.png		0.15262778	106	64253	2
113	113	DZK15_IMG_2907-10944.png		0.772881	19887	33961	4038
114	114	DZK15_IMG_2907-3762.png		0.8403924	1756	63113	119
115	115	DZK15_IMG_2394-11799.png		0.822246	3844	60030	502
116	116	DZK15_IMG_2736-9747.png		0.79993504	2463	61841	404
117	117	DZK15_IMG_7353-6327.png		0.9549556	13812	50421	685
118	118	DZK15_IMG_5643-3933.png		0.9759273	16642	48073	266
119	119	DZK15_IMG_3591-9405.png		0.9219331	248	65246	6
120	120	DZK15_IMG_1368-10602.png		nan	0	65269	2
121	121	DZK15_IMG_5472-4446.png		0.9402283	7291	57318	378
122	122	DZK15_IMG_2565-5130.png		0.9640326	11016	53698	1
123	123	KBY15_IMG_22743-9576.png		0.88471544	30785	26728	4740
124	124	DZK15_IMG_4104-9405.png		0.9622883	3381	61890	71
125	125	KBY15_IMG_10773-3420.png		0.92922044	31961	28706	1014
126	126	DZK15_IMG_8721-4446.png		0.93214095	15062	48281	44
127	127	KBY15_IMG_13680-20520.png		0.90203667	6289	57881	17
128	128	KBY15_IMG_20007-23598.png		0.8868242	36938	19170	2534
129	129	KBY15_IMG_10773-2907.png		0.7089189	14502	39125	4785
130	130	DZK15_IMG_5301-1368.png		0.8194255	26474	27394	868
131	131	KBY15_IMG_7011-16245.png		0.88150245	4999	59193	9
132	132	DZK15_IMG_4788-4446.png		0.88792944	19641	40937	905
133	133	DZKN15_IMG_6840-4617.png		0.8537479	28058	27865	1508
134	134	DZK15_IMG_5985-8550.png		0.9427743	3575	61527	122
135	135	KBY15_IMG_7011-9918.png		0.8866741	35052	21524	1542
136	136	DZK15_IMG_4104-1710.png		0.97255015	3295	62055	93
137	137	DZK15_IMG_7353-6156.png		0.93125755	29729	31418	945

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		id	png	Dice_score	True_Positive	True_Negative	False_Neg
138	138		DZK15_IMG_1881-6156.png	0.7535305	4829	57548	0
139	139		DZK15_IMG_6840-9063.png	0.8698716	10368	52066	2405
140	140		DZKN15_IMG_2565-6498.png	0.90659463	35063	23248	837
141	141		DZK15_IMG_7011-7353.png	0.83532053	3538	60603	92
142	142		DZK15_IMG_5472-3420.png	0.87705797	24612	34024	3988
143	143		DZK15_IMG_5814-5814.png	0.967482	1681	63742	88
144	144		DZKN15_IMG_6840-2736.png	0.71041197	4087	58117	409
145	145		DZK15_IMG_6156-4446.png	0.9233779	7080	57281	653
146	146		DZKN15_IMG_2052-4275.png	0.877222	34470	21417	3166
147	147		KBY15_IMG_3591-14877.png	0.8891215	31009	26793	1308
148	148		DZK15_IMG_4275-2565.png	0.93659943	975	64429	90
149	149		DZKN15_IMG_1881-5472.png	0.93793	6135	58589	380
150	150		KBY15_IMG_3078-16929.png	0.8118734	26845	26250	3289
151	151		KBY15_IMG_3249-14706.png	0.903135	17645	44106	643
152	152		DZK15_IMG_4617-10260.png	0.18060863	638	59109	1013
153	153		DZK15_IMG_2394-4959.png	0.89818996	35902	21495	1925
154	154		KBY15_IMG_14877-3420.png	0.95496094	8513	56220	71
155	155		KBY15_IMG_23256-18468.png	0.9360465	2093	63157	190
156	156		DZK15_IMG_3249-11115.png	0.95961565	7390	57524	349
157	157		DZK15_IMG_3762-4959.png	0.9131307	31172	28433	2057
158	158		DZK15_IMG_5472-2907.png	0.87975854	27247	30841	3361
159	159		KBY15_IMG_7353-16929.png	0.91957337	35090	24308	1469
160	160		DZK15_IMG_3591-11799.png	0.51540166	1280	61849	2407
161	161		KBY15_IMG_6669-16587.png	0.9453734	3816	61279	171
162	162		KBY15_IMG_19836-16074.png	0.7524016	7284	53458	1986
163	163		DZK15_IMG_7524-3762.png	0.9676211	2839	62507	135
164	164		DZKN15_IMG_8721-5130.png	0.8115648	34793	14586	10798
165	165		KBY15_IMG_14877-2394.png	0.8414617	9222	52839	1734

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative
166	166	KBY15_IMG_12996-7353.png	0.912555	26439	34030	1383	
167	167	KBY15_IMG_14706-23085.png	0.9096793	30920	28476	844	
168	168	KBY15_IMG_28044-13167.png	0.9506695	13596	50529	566	
169	169	DZK15_IMG_1881-7011.png	0.004723418	45	46527	39	
170	170	DZK15_IMG_3933-12654.png	0.54621077	1182	62390	70	
171	171	KBY15_IMG_17955-24453.png	0.5833334	133	65213	33	
172	172	DZKN15_IMG_6840-3933.png	0.82329094	33503	17651	1423	
173	173	DZK15_IMG_5643-11970.png	0.6097453	15886	29315	1158	
174	174	DZK15_IMG_7353-1710.png	0.8419106	36187	15759	2409	
175	175	DZK15_IMG_4617-1710.png	0.88689274	2419	62500	613	
176	176	KBY15_IMG_28215-22059.png	0.84040517	33433	19405	7387	
177	177	DZK15_IMG_6669-5814.png	0.75546116	6934	54113	5	
178	178	DZK15_IMG_5472-10944.png	0.79644656	23758	29634	2606	
179	179	DZK15_IMG_6156-4104.png	0.92445457	36907	22597	1106	
180	180	KBY15_IMG_27018-15903.png	0.9820279	10218	54944	146	
181	181	KBY15_IMG_15048-2736.png	0.7659243	20135	33094	1716	
182	182	KBY15_IMG_7695-10089.png	0.4711111	53	65364	118	
183	183	KBY15_IMG_12825-21546.png	0.80783147	24117	29945	1432	
184	184	KBY15_IMG_19665-15903.png	0.5942736	1401	62222	2	
185	185	DZK15_IMG_3762-9918.png	0.86045057	24044	33693	2098	
186	186	DZKN15_IMG_1881-5814.png	0.17872676	226	63233	572	
187	187	DZK15_IMG_5814-1368.png	0.9134204	37036	21479	1895	
188	188	KBY15_IMG_10431-4617.png	0.8425224	29340	25228	646	
189	189	KBY15_IMG_11286-4617.png	0.8642593	35757	18547	2595	
190	190	DZK15_IMG_3249-7866.png	0.95709056	10461	54137	541	
191	191	DZK15_IMG_4788-9918.png	0.8125961	6606	55883	617	
192	192	DZK15_IMG_1710-4788.png	0.92791414	15228	47942	1	
193	193	DZKN15_IMG_5130-3249.png	0.8088889	7371	54682	107	

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		id	png	Dice_score	True_Positive	True_Negative	False_Neg
194	194	KBY15_IMG_16416-4446.png	0.7798567	24925	26539	1963	
195	195	DZK15_IMG_4959-1710.png	0.92974335	8132	56175	985	
196	196	DZK15_IMG_4788-5643.png	0.97807825	10128	54954	36	
197	197	DZK15_IMG_1710-2907.png	0.95377195	7314	57513	120	
198	198	DZK15_IMG_5814-6840.png	0.94624835	6892	57861	41	
199	199	DZK15_IMG_2907-10431.png	0.91499037	33205	26161	2720	
200	200	KBY15_IMG_10602-3078.png	0.44084036	3588	52846	1741	
201	201	DZK15_IMG_2907-7182.png	0.7331443	5040	56827	3472	
202	202	DZK15_IMG_1881-5301.png	0.68229854	1033	63541	3	
203	203	DZKN15_IMG_4788-3249.png	0.8834114	8960	54211	717	
204	204	DZK15_IMG_3078-10089.png	0.8938988	33624	23930	3159	
205	205	DZKN15_IMG_7866-5301.png	0.93980026	1647	63678	161	
206	206	DZK15_IMG_3591-7353.png	0.98272556	6144	59176	99	
207	207	KBY15_IMG_27873-13167.png	0.91519105	36879	21822	3997	
208	208	DZK15_IMG_7524-4104.png	0.926114	41564	17340	1130	
209	209	KBY15_IMG_28557-22914.png	0.4294516	3520	52663	1	
210	210	DZK15_IMG_5643-9747.png	0.9533296	35124	26973	1163	
211	211	DZK15_IMG_3762-14022.png	0.9496428	2725	62522	28	
212	212	DZK15_IMG_5814-3933.png	0.8076923	987	64079	36	
213	213	DZK15_IMG_6327-1881.png	0.94479316	8728	55788	95	
214	214	DZK15_IMG_2907-3933.png	0.9486791	7200	57557	97	
215	215	KBY15_IMG_12825-21204.png	0.87287617	10660	51771	369	
216	216	DZKN15_IMG_855-6840.png	0.89388597	4313	60199	12	
217	217	DZK15_IMG_4446-3078.png	0.9374874	6981	57624	8	
218	218	KBY15_IMG_7182-16587.png	0.9477506	8353	56262	258	
219	219	DZK15_IMG_4275-9234.png	0.92896307	7879	56452	268	
220	220	DZK15_IMG_6327-2907.png	0.95158505	3587	61584	184	
221	221	KBY15_IMG_30267-12825.png	0.75477386	751	64297	481	

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				Dice_score	True_Positive	True_Negative	False_Negative
222	222	DZK15_IMG_2565-3762.png		nan	0	65456	0
223	223	DZK15_IMG_7011-5985.png		0.8736041	19909	39866	618
224	224	KBY15_IMG_10944-4959.png		0.56481135	6048	50168	4890
225	225	DZK15_IMG_4446-4617.png		0.94319415	7397	57248	50
226	226	KBY15_IMG_29241-23769.png		0.98527026	13077	52068	96
227	227	DZK15_IMG_3933-2052.png		0.9244759	4829	59918	0
228	228	KBY15_IMG_15219-2052.png		0.84050393	4503	59324	14
229	229	KBY15_IMG_6840-16416.png		0.9577899	22067	41524	283
230	230	DZK15_IMG_5814-2394.png		0.8797254	35628	20166	4938
231	231	DZK15_IMG_2052-7011.png		0.9150872	2414	62674	0
232	232	DZKN15_IMG_2736-6498.png		0.5686877	2223	59941	2003
233	233	DZK15_IMG_4959-11628.png		0.9358588	2174	63064	281
234	234	KBY15_IMG_27873-12996.png		0.93590075	14630	48902	161
235	235	DZK15_IMG_5985-6669.png		0.8709023	35599	19383	2128
236	236	KBY15_IMG_28728-11970.png		0.76305157	8872	51154	76
237	237	DZK15_IMG_2052-3420.png		nan	0	63461	11
238	238	KBY15_IMG_29241-22914.png		0.94628793	6730	58042	17
239	239	DZK15_IMG_2052-13338.png		0.767702	12631	45261	2685
240	240	DZK15_IMG_1539-7524.png		0.8279804	24697	30577	105
241	241	DZK15_IMG_3591-13509.png		0.8871131	36856	19300	1273
242	242	DZK15_IMG_3762-10260.png		0.78531563	23146	29735	9296
243	243	DZK15_IMG_5643-11115.png		0.9704017	1836	63588	64
244	244	DZK15_IMG_4104-2052.png		0.84822464	4742	59097	448
245	245	DZK15_IMG_1881-12996.png		0.82770365	30140	22848	2294
246	246	KBY15_IMG_27702-11457.png		0.980896	11758	53320	283
247	247	DZK15_IMG_3078-9576.png		0.95521665	21703	41798	311
248	248	DZK15_IMG_3591-8379.png		0.9151614	28575	31663	1421
249	249	DZK15_IMG_2565-4788.png		0.9032234	23650	36818	73

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		id	png	Dice_score	True_Positive	True_Negative	False_Neg
250	250	DZK15_IMG_6840-7353.png	0.8302743	27820	26342	3467	
251	251	KBY15_IMG_15732-2907.png	0.82495856	4482	59152	735	
252	252	DZKN15_IMG_7011-4104.png	0.7365478	3162	60112	53	
253	253	DZKN15_IMG_5814-513.png	0.9618696	782	64692	26	
254	254	KBY15_IMG_2565-17613.png	0.6144681	1805	61466	36	
255	255	DZK15_IMG_7011-8721.png	0.8275821	13814	45966	602	
256	256	DZKN15_IMG_7695-3420.png	0.85264206	26116	30393	4241	
257	257	DZK15_IMG_2565-10089.png	0.7881127	26745	24410	1126	
258	258	DZK15_IMG_6327-7866.png	0.6705168	14687	36415	142	
259	259	DZKN15_IMG_4788-4959.png	0.095238104	1	65516	19	
260	260	DZK15_IMG_5301-1881.png	0.85338265	5771	57782	5	
261	261	KBY15_IMG_23769-19323.png	0.40764332	32	65411	92	
262	262	DZKN15_IMG_5301-684.png	0.79114425	8076	53196	80	
263	263	DZK15_IMG_3249-12825.png	0.95509905	11646	52795	84	
264	264	DZK15_IMG_4788-5814.png	0.94698423	20497	42744	885	
265	265	DZK15_IMG_4446-2736.png	0.9580734	3302	61945	70	
266	266	DZK15_IMG_7524-4275.png	0.94200945	2794	62398	20	
267	267	KBY15_IMG_14877-2565.png	0.8052077	18585	37959	1385	
268	268	DZK15_IMG_2223-11628.png	0.82264626	7178	55263	54	
269	269	KBY15_IMG_15561-2565.png	0.8628171	33583	21274	2727	
270	270	DZK15_IMG_4275-11286.png	0.9203037	41889	16392	1343	
271	271	DZK15_IMG_2223-14022.png	0.9564599	3361	61869	132	
272	272	KBY15_IMG_19836-22743.png	0.9124756	46320	10330	2821	
273	273	DZKN15_IMG_1710-5985.png	0.6068326	524	64333	645	
274	274	KBY15_IMG_2907-14706.png	0.9149157	5726	58745	98	
275	275	DZKN15_IMG_1710-4788.png	0.9211288	35463	24000	1100	
276	276	DZK15_IMG_4959-12483.png	0.9589637	4627	60513	203	
277	277	DZK15_IMG_4617-9576.png	0.37992448	704	62534	1088	

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				Dice_score	True_Positive	True_Negative	False_Negative
278	278	KBY15_IMG_9405-5301.png		nan	0	65529	4
279	279	DZKN15_IMG_5814-855.png		0.8874537	6458	57440	513
280	280	DZK15_IMG_5643-2052.png		0.92742056	3137	61908	29
281	281	DZK15_IMG_5130-11970.png		0.922345	8724	55343	223
282	282	DZK15_IMG_4446-5130.png		0.86726713	32258	23404	4344
283	283	DZKN15_IMG_5985-2907.png		0.985484	6755	58582	155
284	284	KBY15_IMG_29070-11970.png		0.8678562	16537	43963	1116
285	285	DZKN15_IMG_5985-1368.png		0.8176414	24481	30135	5398
286	286	DZK15_IMG_1881-10944.png		0.69519806	11249	44423	1436
287	287	KBY15_IMG_29412-22914.png		0.7432796	17544	35873	766
288	288	DZK15_IMG_6498-5643.png		0.7101827	272	65042	4
289	289	DZKN15_IMG_7011-4275.png		0.89615387	233	65249	44
290	290	DZK15_IMG_1881-13338.png		0.8913099	32683	24882	744
291	291	KBY15_IMG_7524-8550.png		0.8770807	1370	63782	200
292	292	DZK15_IMG_2565-14193.png		0.8907118	39740	16044	1110
293	293	KBY15_IMG_13851-22401.png		0.96149784	5007	60128	3
294	294	DZK15_IMG_2736-9576.png		0.85300654	24364	32775	450
295	295	DZK15_IMG_1539-10944.png		0.76254827	790	64254	492
296	296	KBY15_IMG_17955-24624.png		0.93098074	6569	57993	688
297	297	DZKN15_IMG_6669-3420.png		0.5965392	4792	54262	7
298	298	KBY15_IMG_14364-22743.png		0.68169016	484	64600	111
299	299	DZK15_IMG_4617-8721.png		0.9533938	6454	58451	183
300	300	KBY15_IMG_30951-21717.png		0.96871847	1440	64003	57
301	301	DZK15_IMG_2736-5130.png		0.27134663	402	62975	0
302	302	KBY15_IMG_31806-22230.png		0.9345373	621	64828	7
303	303	DZK15_IMG_7353-5301.png		0.91681993	6481	57879	437
304	304	DZK15_IMG_7182-5130.png		0.34375	11	65483	42
305	305	DZK15_IMG_2223-4275.png		0.5744832	806	63536	954

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		id	png	Dice_score	True_Positive	True_Negative	False_Neg
306	306	DZK15_IMG_6840-3249.png	0.9682728	15946	48545	488	
307	307	DZK15_IMG_9234-4446.png	0.8378128	27058	28002	5936	
308	308	DZK15_IMG_2223-6669.png	0.7176922	2152	61691	323	
309	309	KBY15_IMG_3933-13167.png	0.8810742	24704	34163	3357	
310	310	KBY15_IMG_6669-9918.png	0.7799279	20555	33381	3954	
311	311	DZKN15_IMG_8721-4788.png	0.8698285	33608	21869	849	
312	312	DZK15_IMG_8208-3078.png	0.90571815	2661	62321	181	
313	313	DZK15_IMG_5472-9234.png	0.8924326	32655	25009	1450	
314	314	KBY15_IMG_11970-4446.png	0.83196694	18317	39820	584	
315	315	KBY15_IMG_16074-21717.png	0.9572757	16726	47317	645	
316	316	DZK15_IMG_5643-1710.png	0.8989811	35908	21558	1318	
317	317	DZK15_IMG_5643-2736.png	0.96326303	8561	56322	458	
318	318	KBY15_IMG_15390-22743.png	0.6530539	3630	58049	1271	
319	319	DZK15_IMG_4104-13680.png	0.9345168	22163	40267	48	
320	320	DZKN15_IMG_4617-4617.png	0.93479556	19562	43245	90	
321	321	KBY15_IMG_3762-13509.png	0.8616552	31562	23839	321	
322	322	DZK15_IMG_7695-5301.png	0.8202047	29618	22933	971	
323	323	KBY15_IMG_14877-22572.png	0.8160077	2559	61823	264	
324	324	DZKN15_IMG_6156-1539.png	0.6506339	9726	45365	59	
325	325	KBY15_IMG_3078-17613.png	0.44002944	1794	59176	167	
326	326	KBY15_IMG_12654-21204.png	0.61873466	9178	45047	257	
327	327	DZK15_IMG_6669-3420.png	0.91056174	6078	58264	1052	
328	328	DZK15_IMG_3249-10602.png	0.7288136	17028	35836	996	
329	329	DZK15_IMG_5130-6840.png	0.6279808	9691	44363	5213	
330	330	DZKN15_IMG_6840-5472.png	0.004807692	1	65121	1	
331	331	KBY15_IMG_10773-10773.png	0.67077464	1524	62516	52	
332	332	DZK15_IMG_4788-3933.png	0.9115458	6245	58079	24	
333	333	DZKN15_IMG_8892-5130.png	0.083333336	1	65513	22	

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				Dice_score	True_Positive	True_Negative	False_Negative
334	334	KBY15_IMG_15390-2736.png		0.7458481	22500	27702	10843
335	335	DZK15_IMG_4104-10602.png		0.87067	37212	17269	1512
336	336	DZK15_IMG_3420-6327.png		0.8244045	15627	43252	2
337	337	KBY15_IMG_7353-16074.png		0.8084747	24479	29459	2647
338	338	KBY15_IMG_9918-13338.png		0.977351	15168	49665	138
339	339	DZK15_IMG_2736-7524.png		0.9051833	6444	57742	1202
340	340	KBY15_IMG_13509-22572.png		0.95496273	7750	57055	520
341	341	KBY15_IMG_29241-12825.png		0.61226314	2052	60885	33
342	342	DZK15_IMG_7011-5643.png		0.88312584	12736	49429	2043
343	343	DZK15_IMG_6669-4104.png		0.16472696	92	64511	627
344	344	DZK15_IMG_5643-5814.png		0.8979833	34954	22640	1932
345	345	KBY15_IMG_9918-3762.png		0.62205297	1715	61737	1395
346	346	DZK15_IMG_6840-3762.png		0.9520975	5118	59903	413
347	347	DZK15_IMG_1710-6498.png		0.75789005	8585	51466	648
348	348	DZK15_IMG_8379-2907.png		0.9492848	5840	59072	0
349	349	DZK15_IMG_7866-2223.png		0.733742	7960	51799	151
350	350	KBY15_IMG_7353-17100.png		0.91697997	4512	60207	764
351	351	DZKN15_IMG_0-6669.png		0.9030167	6825	57245	619
352	352	KBY15_IMG_15048-3591.png		0.7708233	25727	24511	1363
353	353	DZK15_IMG_4788-10773.png		0.74323046	12969	43606	6182
354	354	KBY15_IMG_28044-12312.png		0.8416	23144	33680	4381
355	355	DZK15_IMG_3933-6840.png		0.87487835	36398	18727	1056
356	356	DZK15_IMG_3249-13680.png		0.865128	30661	25315	1758
357	357	DZK15_IMG_5472-9405.png		0.90098584	32399	26016	3347
358	358	KBY15_IMG_12825-21888.png		0.87232137	34581	20832	2505
359	359	DZK15_IMG_4959-6156.png		0.8677573	14003	47265	1361
360	360	DZK15_IMG_4788-7182.png		0.87911093	19420	40775	1117
361	361	DZK15_IMG_2052-12654.png		nan	0	65516	20

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		id	png	Dice_score	True_Positive	True_Negative	False_Neg
362	362	362	DZKN15_IMG_1197-5814.png	0.83322895	11314	49693	710
363	363	363	DZK15_IMG_1710-13338.png	0.93911576	17291	46003	705
364	364	364	DZKN15_IMG_855-7011.png	0.9099711	33082	25908	3195
365	365	365	KBY15_IMG_30438-23940.png	0.9816867	4074	61310	16
366	366	366	DZKN15_IMG_5814-1881.png	0.9089627	3869	60892	477
367	367	367	DZK15_IMG_2736-9918.png	0.77562946	28542	20481	1269
368	368	368	DZK15_IMG_1368-9918.png	0.96669567	10580	54227	159
369	369	369	DZK15_IMG_4959-11457.png	0.9450778	2736	62482	5
370	370	370	DZK15_IMG_3762-6669.png	0.78158945	14069	43604	5087
371	371	371	DZK15_IMG_4959-8892.png	0.74244666	16280	37961	9340
372	372	372	DZK15_IMG_8208-6327.png	0.9501636	6387	58479	43
373	373	373	DZKN15_IMG_4788-4104.png	0.8849725	2812	61993	90
374	374	374	DZKN15_IMG_7182-4104.png	0.7411564	6736	54095	686
375	375	375	DZKN15_IMG_5814-1710.png	0.6974717	800	64042	0
376	376	376	KBY15_IMG_29070-12483.png	0.81409466	28637	23820	1702
377	377	377	KBY15_IMG_17955-25650.png	0.9729007	8365	56705	224
378	378	378	DZK15_IMG_6327-6327.png	0.9340747	588	64865	22
379	379	379	DZK15_IMG_6327-5472.png	0.901828	33300	24986	3405
380	380	380	KBY15_IMG_20349-15561.png	0.95461947	4102	61044	197
381	381	381	DZK15_IMG_8379-1026.png	0.9499652	18407	45190	1256
382	382	382	DZKN15_IMG_2223-6156.png	0.84280574	30081	24234	1155
383	383	383	DZK15_IMG_4959-8379.png	0.9638447	4332	60879	41
384	384	384	DZK15_IMG_2052-4275.png	0.8982661	36444	20837	2084
385	385	385	DZK15_IMG_1710-12312.png	0.7378492	1928	62238	433
386	386	386	DZK15_IMG_6498-7524.png	0.9159617	32916	26580	1075
387	387	387	DZK15_IMG_5643-11799.png	0.9651856	2509	62846	67
388	388	388	DZK15_IMG_3249-3591.png	0.9276537	12707	50847	362
389	389	389	DZK15_IMG_3591-11286.png	0.80539054	25967	27020	1198

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		id	png	Dice_score	True_Positive	True_Negative	False_Negative
390	390	KBY15_IMG_12825-10602.png	0.9163672	14277	48653	163	
391	391	DZKN15_IMG_5985-4617.png	0.9604625	5648	59423	122	
392	392	DZK15_IMG_3933-13851.png	0.839579	32341	20836	812	
393	393	DZK15_IMG_3420-13167.png	0.0009638555	1	63462	109	
394	394	KBY15_IMG_14364-3420.png	0.7924712	14652	43210	1378	
395	395	DZKN15_IMG_5814-2907.png	0.9628751	10154	54599	487	
396	396	KBY15_IMG_29070-12996.png	0.94358176	4223	60808	459	
397	397	DZK15_IMG_3762-4617.png	0.6863051	2854	60073	10	
398	398	KBY15_IMG_7524-9063.png	0.9045455	398	65054	7	
399	399	DZK15_IMG_2565-13680.png	0.80596966	25139	28293	4014	
400	400	KBY15_IMG_32490-23256.png	0.8597033	17988	41677	2405	
401	401	DZKN15_IMG_7695-4788.png	0.95597976	1227	64196	27	
402	402	DZK15_IMG_3591-6498.png	0.7357555	891	64005	0	
403	403	DZK15_IMG_4617-4446.png	0.8249107	23677	31808	1519	
404	404	DZK15_IMG_5814-8892.png	0.9829322	15722	49268	199	
405	405	DZKN15_IMG_7524-3591.png	0.86076677	31625	23680	2315	
406	406	KBY15_IMG_28386-22059.png	0.91258216	44555	12445	4470	
407	407	KBY15_IMG_22914-9405.png	0.8352093	1447	63518	54	
408	408	DZKN15_IMG_8892-4788.png	0.9714949	10463	54459	449	
409	409	KBY15_IMG_27360-27189.png	0.7336562	909	63967	77	
410	410	KBY15_IMG_31977-22230.png	0.9288488	18779	43880	1503	
411	411	DZK15_IMG_5130-5130.png	0.9386202	6415	58282	355	
412	412	DZK15_IMG_7182-4788.png	0.9624329	3497	61766	126	
413	413	KBY15_IMG_24624-17955.png	0.9714115	3262	62082	157	
414	414	KBY15_IMG_13338-21888.png	0.7975882	926	64140	36	
415	415	KBY15_IMG_12996-21375.png	0.59333146	5205	53196	5144	
416	416	DZKN15_IMG_4617-5472.png	0.21719457	24	65339	168	
417	417	DZK15_IMG_7011-7695.png	0.85885435	18352	41152	495	

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		id	png	Dice_score	True_Positive	True_Negative	False_Neg
418	418	DZK15_IMG_4959-8550.png	0.73040944	20534	29844	7727	
419	419	DZKN15_IMG_6498-3762.png	0.9719795	1613	63830	64	
420	420	DZK15_IMG_1710-7866.png	0.94126725	6707	57992	657	
421	421	KBY15_IMG_28728-11457.png	0.8619491	23801	34111	900	
422	422	KBY15_IMG_12483-21033.png	0.95718217	4348	60799	212	
423	423	DZKN15_IMG_6840-5814.png	0.78673446	6500	55512	860	
424	424	DZK15_IMG_1881-7353.png	0.8951418	2036	63023	2	
425	425	KBY15_IMG_11115-10773.png	0.79047966	9781	50570	928	
426	426	DZK15_IMG_4446-12825.png	nan	0	65533	2	
427	427	KBY15_IMG_11115-4446.png	0.8676989	2830	61843	418	
428	428	DZK15_IMG_7524-1026.png	0.7330605	20242	30552	2013	
429	429	DZK15_IMG_6327-4788.png	0.8802927	27422	30656	3041	
430	430	KBY15_IMG_7866-16758.png	0.8543509	32218	22333	3183	
431	431	DZK15_IMG_3420-2223.png	0.35734332	191	64658	1	
432	432	DZK15_IMG_2052-8721.png	0.98529583	8309	56979	65	
433	433	DZKN15_IMG_6327-3591.png	0.8828909	28818	29073	1648	
434	434	DZK15_IMG_5301-7524.png	0.89689815	20443	40393	803	