

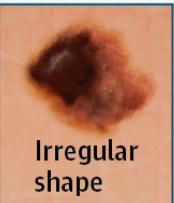
- Early-stage melanoma is almost **100%** accruable
- **Early diagnosis** is crucial for the treatment
- Visual Dermoscopic examination >> naked eye examination
- Quantitative criteria: “ABCD” rule
- Melanoma, developed from the pigment-producing cells, is a kind of **deadliest** skin cancer

# Ugly duckling sign of melanoma

## ABCDEs of melanoma

A melanoma may have more than one feature.

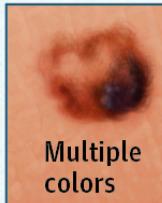
Asymmetry



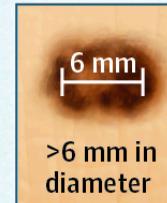
Border



Color



Diameter



Evolving



## Examples of atypical moles

Individuals with atypical moles may have an increased risk of developing melanoma.



MMs lack the ABCDE criteria

MMs that are smaller than 6 mm

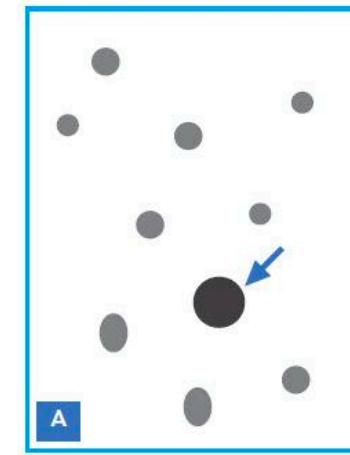
## Skin self-check

Look for moles that appear different from other moles (ugly ducklings) or that are changing or growing. If you notice a change in a mole or an ugly duckling, ask your doctor to check it.

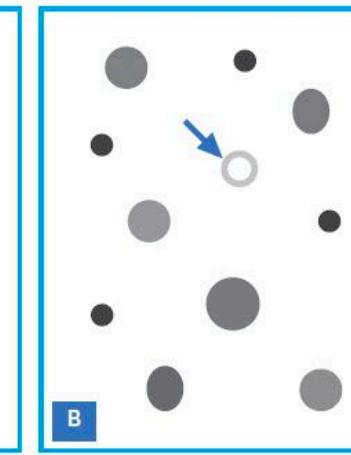


K. BUCHER

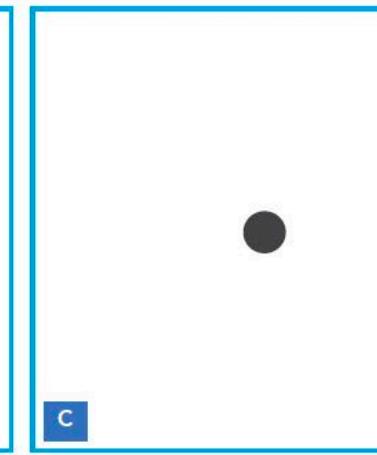
No "ugly duckling is seen"



A



B

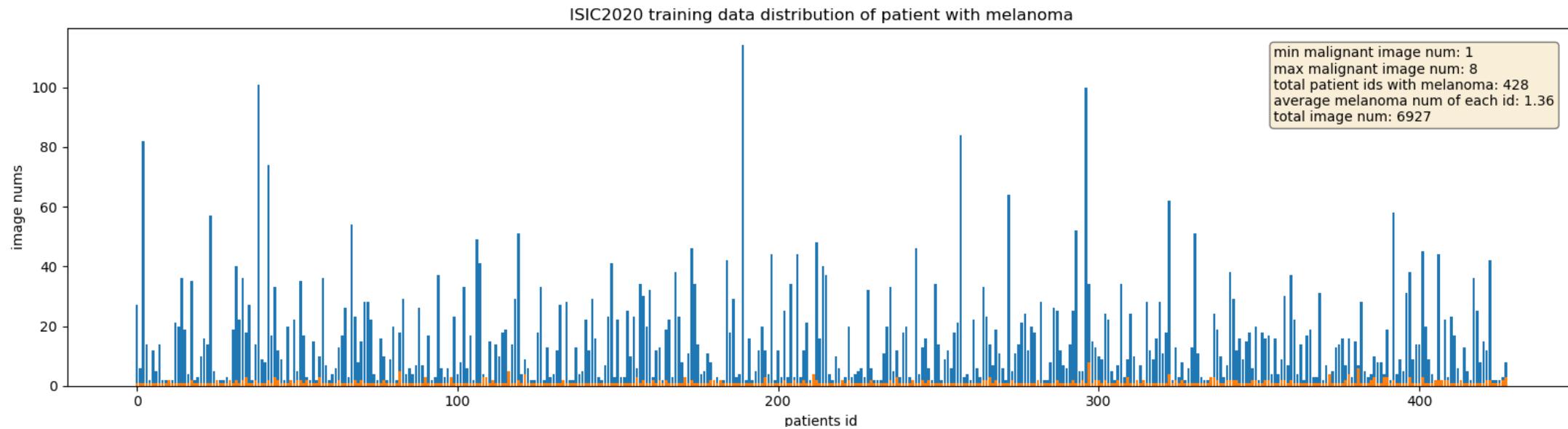


C

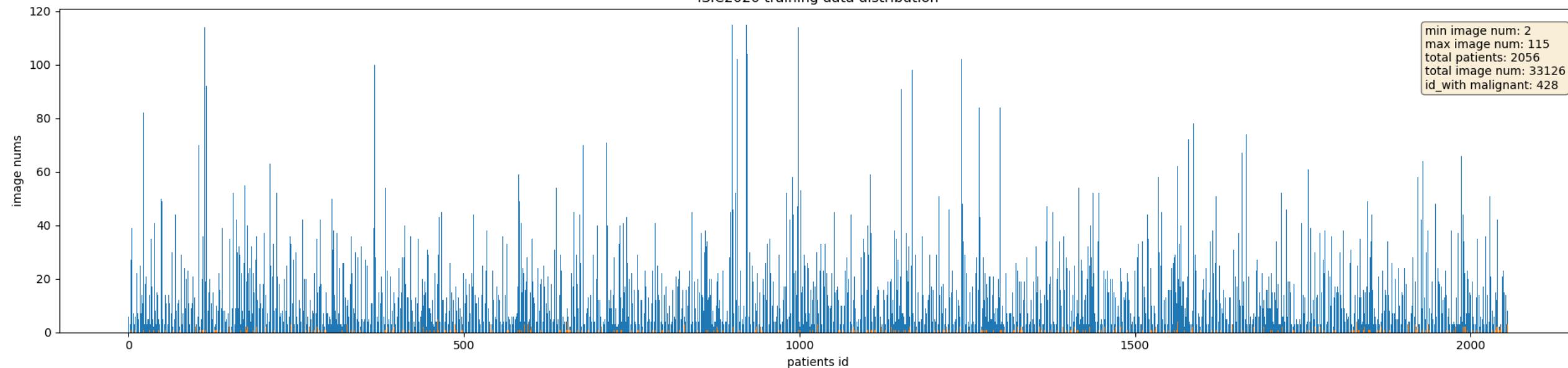
1998, Grob, et al

nevi in the same individual tend to resemble one another, and that MM often deviates from this nevus pattern.

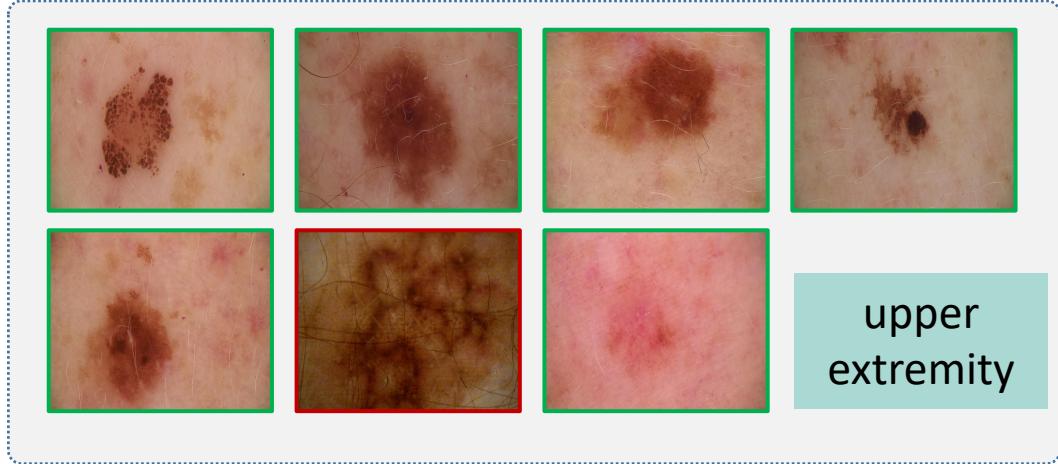
# ISIC melanoma recognition challenge --- considering “**contextual**” images within the same patient to determine which images represent a melanoma.



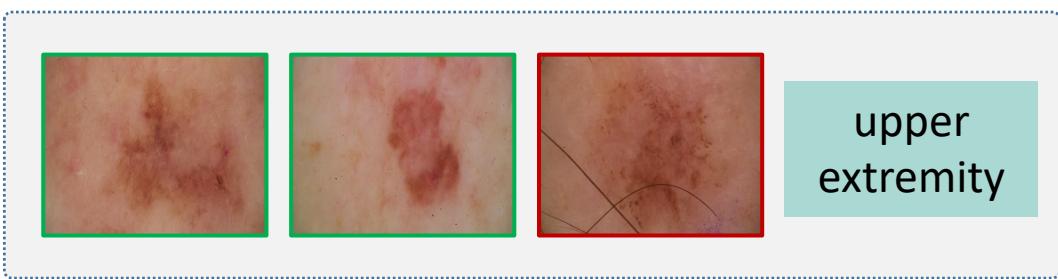
ISIC2020 training data distribution



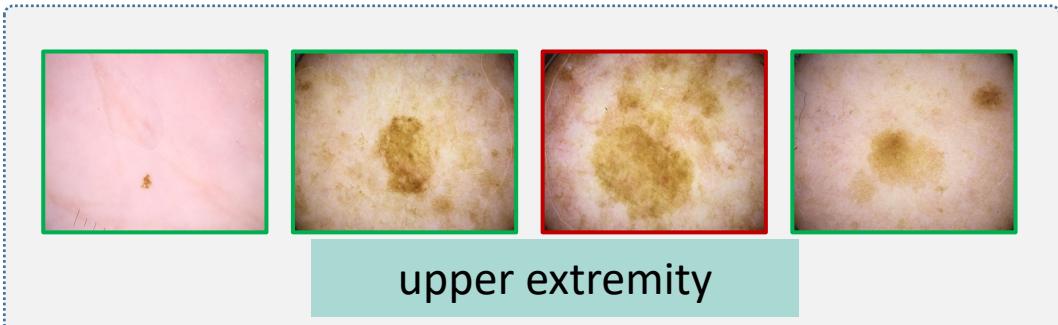
IP\_0038545  
Total: 28  
Malignant: 1



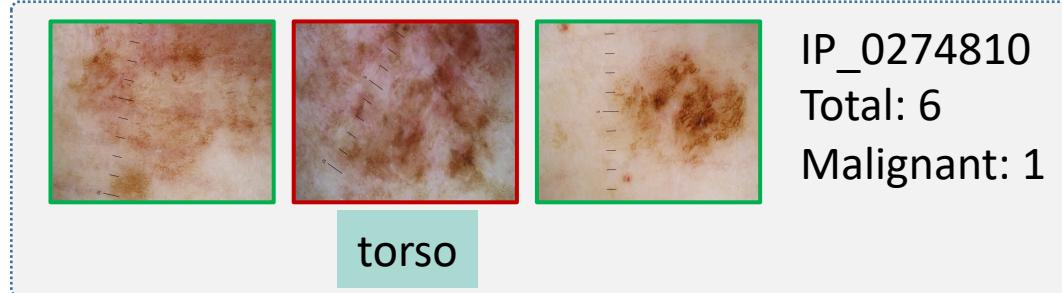
IP\_0059113  
Total: 7  
Malignant: 1



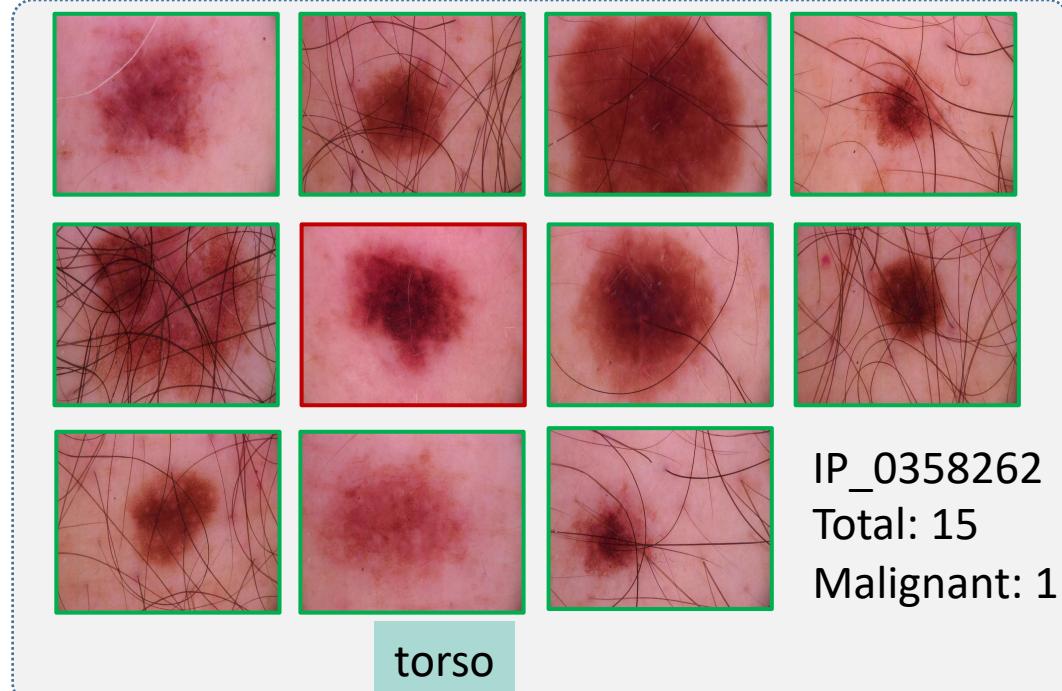
IP\_0135517  
Total: 15  
Malignant: 1



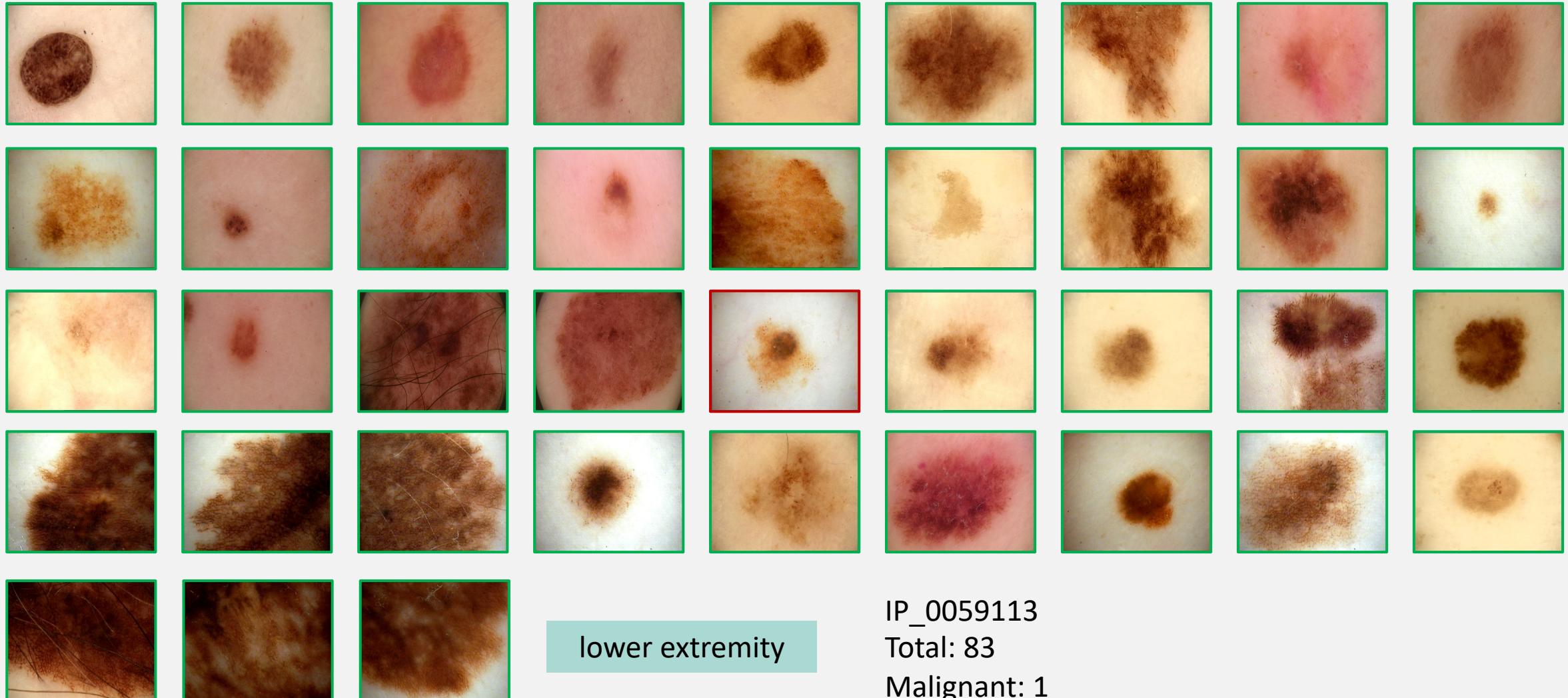
IP\_0232771  
Total: 13  
Malignant: 1



IP\_0274810  
Total: 6  
Malignant: 1



IP\_0358262  
Total: 15  
Malignant: 1



lower extremity

IP\_0059113

Total: 83

Malignant: 1

The 'Ugly Duckling' Sign: Identification of the Common Characteristics of Nevi in an Individual as a Basis for Melanoma Screening , *Archives of dermatology*, 1998

Ugly Duckling Sign as a Major Factor of Efficiency in Melanoma Detection, *JAMA Dermatol*, 2017

The role of the ugly duckling sign in patient education, *Journal of the American Academy of Dermatology*, 2017