Paper 1:

P. Ghadekar, A. Khandelwal, P. Roy, A. Gawas and C. Joshi, "Histopathological Cancer Detection using Deep Learning," 2021 International Conference on Artificial Intelligence and Machine Vision (AIMV), Gandhinagar, India, 2021, pp. 1-6, doi: 10.1109/AIMV53313.2021.9670991

The paper by Ghadekar et al. (2021) present a system for detecting cancer in histopathological scanned images using deep learning techniques. It utilizes the ResNet 50 model, employing transfer learning in Convolutional Neural Networks. The goal is to classify whether a given lymph node scan is cancerous or non-cancerous. The dataset used is the PatchCamelyon benchmark dataset from Kaggle, containing 277,483 images. The primary model, ResNet 50, is known for its effectiveness in image classification tasks. The system achieved an impressive 95% accuracy in classifying cancerous and non-cancerous lymph node scans, with no specific details on other comparisons provided. The main evaluation metric used is accuracy, measuring the proportion of correctly classified instances in the dataset.

Paper 2:

M. Wang and X. Gong, "Metastatic Cancer Image Binary Classification Based on Resnet Model," 2020 IEEE 20th International Conference on Communication Technology (ICCT), Nanning, China, 2020, pp. 1356-1359, doi: 10.1109/ICCT50939.2020.9295797.

This paper focuses on detecting metastatic cancer through image classification, with a specific emphasis on achieving high performance for small patch-level images. The authors propose a novel method based on the ResNet model and evaluate it on the PatchCamelyon (PCam) benchmark dataset. This dataset contains 220,025 samples, consisting of 89,117 cancerous and 130,908 non-cancerous or normal images. The primary model used is the ResNet, known for its effectiveness in training deep networks and addressing gradient-related challenges. Comparative results demonstrate that the ResNet50 model outperforms other models (VGG19 and VGG16) with a 1.0% higher accuracy than VGG19, as well as a 1.2% higher AUC-ROC score and 1.5% higher accuracy than VGG16. Evaluation metrics encompass the AUC-ROC score, assessing the classifier's ability to differentiate between cancerous and non-cancerous classes, and accuracy, providing an overall measure of the model's correctness in image classification.