

Title: Comparing deep (transfer)learning models on the BreastPathQ dataset

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Short description: The BreastPathQ dataset was part of a challenge of the 2019 SPIE Medical Imaging conference. It was a cancer cellularity scoring challenge for tumor burden assessment in breast pathology. Participants were tasked to develop an automated method for analyzing histology patches extracted from whole slide images and assign a score reflecting cancer cellularity in each. In current clinical practice, this task is performed manually and relies upon expert interpretation of complex tissue structures. Furthermore, reproducibility of cancer cellularity scores is a concern in current practice, therefore a fully automated method holds great promise for increasing throughput and reducing inter- and intra-observer variability.

In Figure 1, we can see the cancer cellularity for different parts of a whole slide pathology image. Your task will be to score patches extracted from a whole slide image using deep learning models. More specifically, you will compare the results of different transfer-learning models on this dataset.

This project is in the same field as the “Project Imaging” course and assumes that you have programming knowledge in Python.

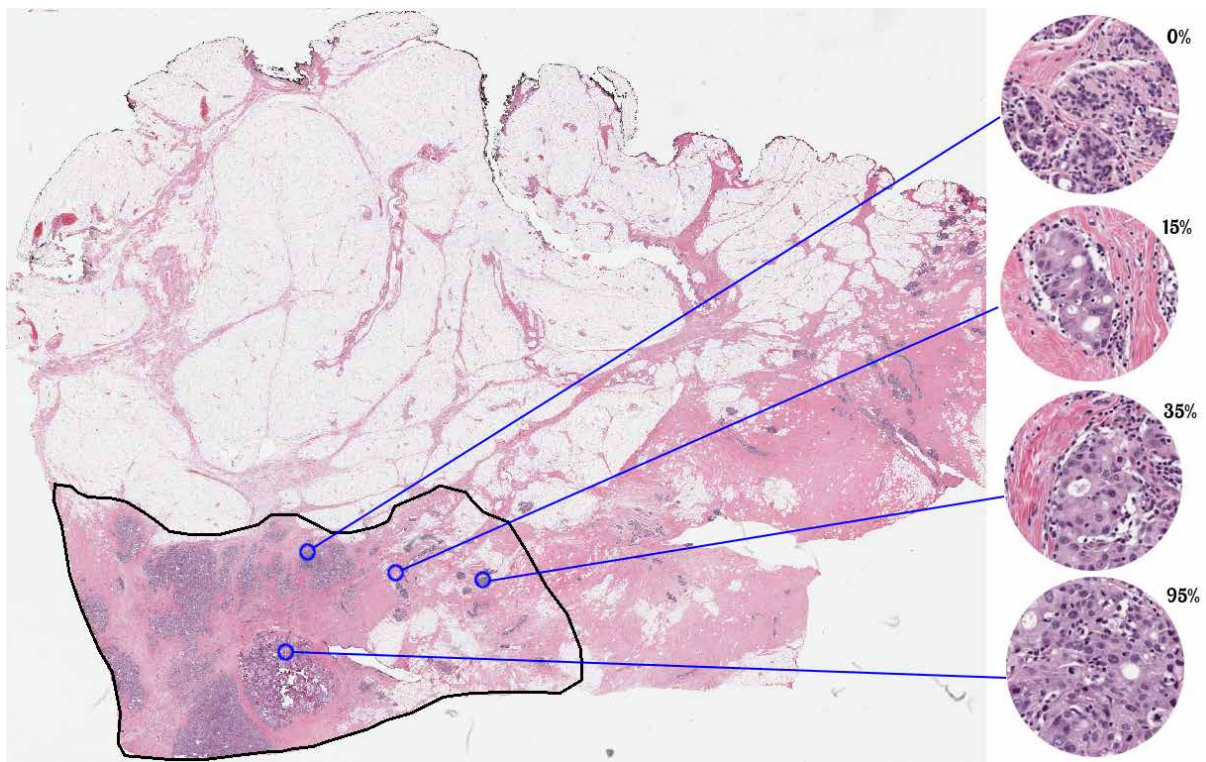


Figure 1: Cancer cellularity in breast pathology whole slide images. Image from: <https://breastpathq.grand-challenge.org/>