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Benchmarking Robustness of Pathology Vision Foundation Models for Prostate Cancer Relapse Prediction

Prostate cancer relapse prediction is a challenging task within computational pathology as tissue preparation and digitization are not standardized. The different protocols lead to domain shifts, against which a deep learning model must be robust and focus on biological information rather than variations in appearance. We address this challenge through the usage of vision foundation models that are pre-trained on large and diverse pathology datasets. Six different models are fine-tuned and evaluated on a histopathology dataset that includes multi-domain prostate cancer images on patient-level. The comparison shows that larger models are in general superior and that robustness varies depending on the vision foundation model and the domain.

I want to give a Lightning Talk

yes

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