## Background

The field of Pathology is quickly growing and establishing itself as a key player in the world of interdisciplinary medicine. At Baylor College of Medicine, we have begun the transformation to a digitized platform to provide high quality precision medicine to our patients. On the digital front, we are aiming to expand our capabilities for remote diagnosis both in real time and otherwise. Our digitization will play a key role in the overall dynamics of precision medicine. Our department of pathology provides services to patients’ at 47 sites across Texas covering almost 190,000 square miles. Our goal is to expand our reach to farther locations digitizing the services that we currently provide and being able to remotely provide live and delayed diagnosis.

## Methods

Key components that our digital initiative focused upon include: digitized signouts; live diagnosis for frozen sections and fine needle aspirations; consult case sharing and research. We referenced the College of American Pathologists Laboratory Accreditation Program recommendations and guidelines. As far as the mandatory requirements are concerned, two key factors were noted:

1. Validation be performed and approved by the Laboratory Medical Director.
2. Users of the WSI system be trained to use the system and the training be documented.

## Conclusions

We are on our way towards successful completion of our digital initiative. We will be able to digitally sign out cases on site and off site, provide live diagnosis for remote frozen sections and fine needle aspirations, reach far medically underserved populations in the US and beyond and give them access to our highly qualified pathologists and specialists, enhance our teaching capabilities and grow our research interests.

## Discussion

As advanced and precise medicine has become and is on the verge of becoming still yet, it is unfortunate to realize that medically underserved populations still do not have access to high quality healthcare and life changing treatments for a multitude of reasons ranging from geographic limitations to financial burdens. In order to provide a larger number of patients pathology services across geographic boundaries, digital pathology will begin to play a pivotal role in the future. A glimpse of the wide potential of digital pathology was made possible during the COVID-19 pandemic. Laboratories and pathologists had to find a safe way to provide remote diagnostic impressions for H&E cases, frozen sections, fine needle aspirations and teaching activities. Digitizing the services that we currently provide and being able to remotely provide live and delayed diagnosis will allow us to expand our reach. We also highly value our training for future physicians and therefore have focused on utilizing our digital initiative for teaching purposes, for research and for tumor board presentations.

## Future

As digital pathology continues to improve precision medicine, new tools will emerge allowing merging of morphology based assessment with molecular pathology, digital pathology and possibly artificial intelligence to allow for maximum productivity.