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CONFERENCE ABSTRACT

UPMC Experience Using Smartphones for Pathology Teleconsultation

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Introduction: Smartphones are being increasingly used in healthcare. They are virtually ubiquitous and most cell phones today come readily equipped with internet connectivity and digital cameras. Our aim at the University of Pittsburgh Medical Center (UPMC) was to expand our teleconsultation opportunities using smartphones.

Methods: We tested various adapters that allowed smartphones to acquire digital pathology microscopic images via the ocular objective of a light microscope. Our institution then created an application called *Pocket Pathologist* that can be used with a photo gallery in iPhones to interface with our web-based teleconsultation portal. This provided our clients with a rapid method for transmitting digital pathology images for expert teleconsultation.

Results: Since launching the application we have received only a few telepathology cases via this method. The images received were of adequate quality to permit interpretation and render a diagnostic pathology report for these cases. The number of cases submitted via smartphone is comparable to those received via our direct web consultation service. Occasional complaints from users were related to selecting the appropriate microscope adapter for their smartphone and browser issues with our telepathology portal.

Discussion: Our experience with ad hoc web-based consultation using smartphones is still early in the adoption phase. Nevertheless, the number of cases submitted via this method has been lower than expected. One possible issue with using smartphones for teleconsultation may be the inability to capture entire cases with static images and/or demonstrate the necessary pathology details. Insufficient marketing of our application may have also limited widespread adoption of this method for teleconsultation.

Keywords: smartphones; web-based consultation; smartphone adapters for light microscopes