

Clinical pathology selected abstracts

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A mixed-methods study of clinician attitudes toward pathology explanation clinics

February 2024—Patients receiving a pathology report may have many outstanding questions that can cause anxiety and confusion. The 21st Century Cures Act has increased patients' access to pathology reports via delivery to patient portals. However, reports sent without further explanation can exacerbate the anxiety and confusion. Many health care institutions are creating new communication methods to help patients interpret these reports and develop a better understanding of their health status. One such approach is the pathology explanation clinic (PEC), which is an interactive visit between patients and pathologists to discuss the pathology report and review the patient's slides. The PEC is sometimes referred to as a patient-pathologist consultation or a patient-centered pathology visit. The authors conducted a study to characterize the attitudes of treating clinicians toward PECs at a tertiary care academic medical center. They used quantitative and qualitative methods to determine clinicians' attitudes toward utilizing PECs in health care. Clinicians from different specialties, including surgery, internal medicine, and hematology/oncology, were recruited for the study. The clinicians were contacted once via email to participate. The authors asked their participating colleagues, "How interested would you be in having your patient meet with a pathologist to discuss their pathology report and see their tissue under the microscope?" Participating clinicians were directed to rank their interest and expand on concerns and benefits in a semi-structured interview. Audio recordings of the interviews were transcribed and analyzed using a qualitative thematic approach. Most interviews were conducted via Zoom, but phone interviews and email responses were also conducted and recorded. Three assumptions were shared with the subjects to ensure best practice guidelines for PECs. These included the assumptions that patients were already told their diagnoses; pathologists would not discuss treatment options; and pathologists would send follow-up notes to providers about discussions that occurred during PECs. The response rate for the study was 59.3 percent (35 of 59 clinicians). Eighty-three percent (29 of 35) of the participants reported an interest in PECs. Clinicians considered their highly motivated and educated patients to be the most likely to participate in a PEC. Although several clinicians believed that PECs could improve patient understanding, they expressed concern about cognitive overload and emotional distress to patients. Other concerns included pathologists' communication skills, care fragmentation, and increased clinician workload. Overall, the clinicians maintained that PECs had the potential to increase clinician efficacy and improve quality of care. The authors concluded that while the College of American Pathologists, American Society for Clinical Pathology, and others continue to champion PECs, it is essential to consider clinicians' opinions and concerns before implementing them.

Bergholtz SE, Kurnot SR, DeJonckheere M, et al. A mixed-methods study of clinicians' attitudes toward pathology explanation clinics. *Am J Clin Pathol*. 2023;159:437-447.

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Use of an automated dried blood spot method for therapeutic drug monitoring of immunosuppressants

Patients receiving a solid organ transplant often require a lifetime of immunosuppressant therapy to prevent allograft rejection. By optimizing a patient's immunosuppressant therapy, one-year graft survival rates increased to up to 97 percent for living donor transplant recipients in 2017, according to the United States Renal Data System. Therapeutic drug monitoring (TDM) can determine the optimal dose of immunosuppressant for a patient. TDM is important because immunosuppressant drugs have a wide variation in interindividual and intraindividual pharmacokinetics and a narrow therapeutic range. These factors necessitate frequent patient monitoring, which

means that patients must make many trips to a hospital or blood draw center to have their blood drawn and analyzed for immunosuppressant concentrations. This potentially can be minimized by at-home dried blood microsampling, which involves patients sending samples to the laboratory via regular postal mail. However, lack of automated methods in clinical labs that perform routine testing pose a challenge to implementing this methodology. The authors conducted a study to compare a fully automated dried blood spot extraction method to venous whole blood manual extraction methods for tacrolimus, sirolimus, everolimus, and cyclosporin A. Blood samples from healthy volunteers were spiked with the drugs and run on a liquid chromatography platform coupled to tandem mass spectrometry. A Bland-Altman comparison was used to assess agreement between the automated dried blood spot and manual extraction whole blood methods. The analytical acceptance limit was based on the European Medicine Agency's criterion for incurred sample reanalysis that at least 67 percent of all paired samples be within 20 percent of the mean of both samples. Clinical acceptance limits required that at least 80 percent of all paired samples be within 20 percent of the whole blood concentration of the sample. The results showed that the hematocrit impacted dried blood spot quantitation for all analytes. However, this could be alleviated using a formula based on the tacrolimus data subset: $\text{dried blood spot}_{\text{corrected}} = \text{dried blood spot}_{\text{measured}} / (1.6305 - 1.559 * \text{hct})$. Both analytical and clinical acceptance criteria were met by correcting the formula. The authors concluded that automated dried blood spot analysis has a potential to ease the burden of routine therapeutic drug monitoring of immunosuppressants, negating the need for manual extraction methods. However, additional clinical validation studies, involving capillary finger prick samples, are necessary to demonstrate the applicability of the method in a real-life setting.

Deprez S, Stove C. Application of a fully automated dried blood spot method for therapeutic drug monitoring of immunosuppressants: Another step toward implementation of dried blood spot analysis. *Arch Pathol Lab Med*. 2023;147:786–796.

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