Conclusions: Of 727 bone marrow specimens received, 118 (16.2%) were cancelled subsequently after the clinician was emailed. The most common reasons for cancellation were normal bone marrow aspirate/biopsy report (67 of 118; 56.8%), wrong test ordered (25 of 118; 21.2%), and cytogenetic testing was previously done with normal results (10 out of 118; 8.5%). Cancellation of FISH testing when adequate conventional karyotype was obtained was recently instituted (6 out of 75; 8%). A focused intervention can help prevent overutilization of cytogenetic testing as well as encourage collaborative interactions between the pathologists and the oncologists in ensuring better service to the patients. Unnecessary financial burdens for the patient and time-consuming labor for the geneticist can be preempted. This could serve as a tool to help pathology residents learn effective test utilization strategies.

Improving Board of Certification Performance Using Learning Management Systems

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Objectives: To incorporate simulated computer-based exams using learning management system to better prepare students in the ASCP BOC certification exams.

Method: All medical laboratory technology coursework is incorporated in the institutions’ Learning Management System. Quizzes and exams are delivered in a computer-based format and timed. This change in practice was incorporated to mimic the student board exams. A comprehensive exit exam that prepares students for Board of Certification exams was also incorporated in the curriculum. Retrospective review and comparative analysis of ASCP BOC test scores after implementation of computer-based simulated exams in Medical Laboratory Technology classes were conducted to show the difference in performance.

Results: Comparative analysis of outcomes through retrospective review of results shows improvement in the program’s performance in the ASCP BOC exams. Students showed an improvement in the performance across disciplines and overall test scores. There is a significant improvement in test scores and overall pass rate in student BOC performance after implementation of computer-based simulated exams in their respective program classes.

Conclusion: The incorporation of simulated exams using the institutions’ learning management system prepared students in their ASCP’s Board of Certification exams and provided better outcomes in the test scores.

Role of Pathologist as an Educator in Lifestyle Medicine in Era of Molecular Diagnostics

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Objectives: In an age when chronic diseases have become the leading cause of mortality and morbidity, there is a pressing need to focus on the basic cause of these diseases—lifestyle choices. Recent advances in multiomics, including epigenomics, proteomics, transcriptomics, metabolomics, and...
others, have created an opportunity for integrating omics to create a database that is a comprehensive and dynamic model of the molecular changes that can serve as biomarkers, crucial for risk stratification, early detection, prevention, and tailored therapy for chronic diseases. Here comes the role of the pathology educator in effectively disseminating the essential information in a manner that students can appreciate its significance from the very beginning.

Methods: As a long-term solution, we propose a curriculum integrated with lifestyle medicine to familiarize future physicians early on in their training. A unique methodology using TBL and flipped classroom techniques was employed to incorporate multiomics in pathology curriculum. Sessions on lifestyle modifications relevant to chronic diseases, along with integrated multiomic data, were prepared as self-directed learning modules. Student and faculty feedbacks were compiled.

Results: This work is still in progress, and a first perception of the working and efficacy of this approach is expected to be promising, as judged by preliminary feedback from students, which revealed that students were enthusiastic toward the idea and appreciated the importance of multiomic data and their application to formulate the diagnosis and personalized treatment plan. They were highly engaged during the exercise and appreciated faculty facilitation.

Conclusion: In an effort to develop new strategies to combat chronic diseases, our proposal of integrating multiomics with lifestyle medicine might be an effective way to acquaint learners with the essence and application of molecular pathology toward lifestyle choices. This method could aid them in crafting effective preventive and therapeutic approaches in the era of precision medicine.

Development and Implementation of a Resident Training Tracking Tool Targeted to Documentation of Milestone Fulfillment

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Objectives: Despite adoption of the 2015 Accreditation Council for Graduate Medical Education (ACGME) and American Board of Pathology (ABP) Milestones for the assessment of resident education, very few tools are available to organize the longitudinal collection of residency trainee data relevant to milestones. With the goal of being able to efficiently and accurately convert resident accomplishment data into milestone scores during biannual resident evaluations, we devised a user-friendly tracking tool to collect, display, and map these data to relevant ACGME milestones.

Methods: A committee was convened to overhaul the existing system, consisting of representatives from throughout the Department of Pathology. The committee assigned each resident accomplishment datapoint, which was historically tracked by the program (eg, frozen-section numbers, licensure status) to a corresponding ACGME milestone (eg, PC6, PROF1, respectively). A spreadsheet (tracking tool) was created to present these datapoints under the appropriate milestone. A prototype of the tool was piloted by a resident, and changes were made for clarity. The final version was populated by all residents and used by the clinical competency committee (CCC) during subsequent 6-month evaluation meetings. Deidentified data measuring the degree of milestone changes were abstracted to assess the impact of the tracking tool.

Results: The tracking tool was successfully used by the CCC for assessment of resident milestones and was favorably received by program leadership and faculty. Use of the tool was associated with increased (positive) changes in resident milestones in 8 of 12 residents, when compared to changes in paired milestone levels from the preceding evaluation period. Moreover, the degree of change in resident milestone level scores was statistically significant in 4 of 12 residents.

Conclusions: The resident data tracking tool was used successfully for data collection and CCC milestone assessment. This tool may be associated with greater fidelity between milestone levels assessed and relevant internal resident performance.

Voice Recognition Systems: Newer Is Better—or So We Thought

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Objectives: We compare two similar voice dictation systems, Dragon 360, a server-based system, to the upgraded Dragon Medical One (DMO), a cloud-based system. We review the efficiency of these products to the high-volume cases of dermatopathology to evaluate its overall efficiency.

Methods: Daily sign-out delays of each method were recorded along with common issues (system crash, mis-typing, and inaccuracies), and the time delay was recorded and tabulated for each day.

Results: Each program had identical voice recognition errors, particularly in site designation (eg, shin vs chin) and in part identification (eg, A vs 8). During a 1-month period, Dragon 360 had to be restarted once due to crashing, whereas DMO needed to be restarted on 14 occasions. The most drastic difference was in speed of recognition. While the first phrase in both had an average 5-second delay in typing, the Dragon 360 transcriptions were able to be completed upon finishing dictating. DMO was unable to keep pace and often experienced a 2- to 5-second delay per short phrase.