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903.HEALTH SERVICES AND QUALITY IMPROVEMENT -MYELOID MALIGNANCIES

Interactive Pathology Tutorial in Neoplastic Hematology Disorders for Medical Hematology-Oncology Fellows

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Context: Hematology-Oncology (HO) fellows receive limited instruction in the process of establishing a diagnosis for hematologic neoplasms. Learning neoplastic hematology often occurs in limited encounters such as reviewing slides with pathologists or during a tumor board where the diagnosis has already been established. In the current study, we developed a web-based interactive pathology tutorial in neoplastic hematology disorders for HO fellows to work up simulated cases and establish the diagnosis.



Design: An online system ("Pathology Playground") was utilized to load case materials including microscopic images and ancillary studies. Twelve high-yield simulated cases of common leukemias and lymphomas likely to be encountered in the daily practice, such as acute promyelocytic leukemia, were included (www.drdoubleb.com/crowdunknowns/study-set/30). At the beginning of each case, trainees review the clinical history and slide images (image 1), and then they are given the option to request additional work up, such as flow cytometry, immunohistochemistry, karyotype and/or molecular studies. Based on the results, they can enter their diagnostic impression. If the diagnosis is correct, the user is shown a short educational presentation about the entity with the key pathology findings.

Results: The tutorial was integrated in the educational curriculum of our HO fellowship program, and bimonthly teaching sessions were held to review two cases each time. During the sessions, trainees request ancillary studies to complete the diagnostic work-up using the software, and interpret the findings. As the case is being worked up by the trainee, the hematopathologists and HO fellowship program director discuss the requested work up findings, the appropriate work-up tools of the case as well as the clinical picture and the implications on the patient management. All of our six HO fellows attended the sessions, and a survey from the trainees showed high ease of use of the system and they viewed it as a very useful educational tool.

Conclusions: The interactive tutorial in hematopathology was highly received by our HO fellows, and they found it beneficial for their education. Expanding the use of this online interactive tutorial and incorporating additional cases would enhance its value as a learning resource.

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Case #78

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Submitted by [Ahmad Alkhasawneh](#)

Blasts versus atypical monocytes

62-year-old woman admitted with worsening dyspnea on exertion and found to have leukocytosis. CBC result, representative cells from differential and representative bone marrow are provided. ##### Work up (including immunohistochemistry on tissue, flow cytometry, karyotype, FISH, and molecular), morphology guide for blood smear and flow cytometry guide are available under "specials to order".

Final Diagnosis

Specials to order:

H&E #1

Wbc	19.15
Rbc	2.12
Hgb	6.5
Hct	18.7
MCV	85.2
MCH	30.9
MCHC	34.8
Platelet	19.0
Diff. Count	96
Neutr.	1.2
Fos	0
Blast	0
Lymph.	74.4
Mono	—
NRBC	4.2
Others	74.4

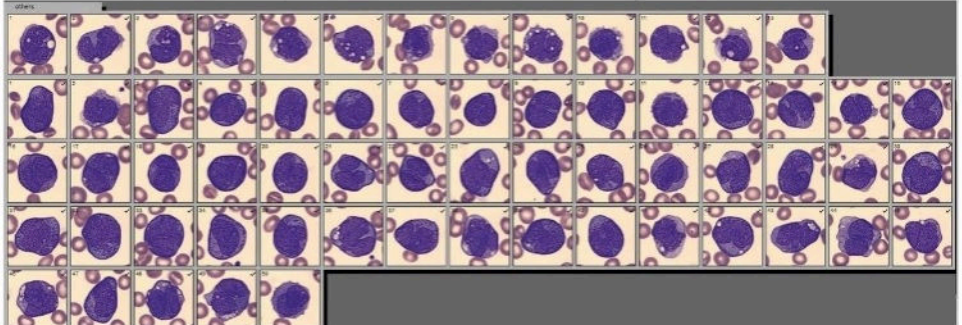


Figure 1