

What is claimed is:

1. A computer-implemented method of processing an electronic image corresponding to a specimen and automatically prioritizing processing of the electronic image, the method comprising:
 - receiving a target electronic image of a slide corresponding to a target specimen, the target specimen comprising a tissue sample of a patient;
 - computing, using a machine learning system, a prioritization value of the target electronic image, the machine learning system having been generated by processing a plurality of training images, each training image comprising an image of human tissue and a label characterizing at least one of a slide morphology, a diagnostic value, a pathologist review outcome, and/or an analytic difficulty; and
 - outputting a sequence of digitized pathology images, wherein a placement of the target electronic image in the sequence is based on the prioritization value of the target electronic image.
2. The computer-implemented method of claim 1, wherein the label comprises a preparation value corresponding to a likelihood that further preparation is to be performed for the target electronic image.
3. The computer-implemented method of claim 1, wherein the label comprises a preparation value corresponding to a likelihood that further preparation is to be performed for the target electronic image, and

wherein the further preparation is performed for the target electronic image based on at least one of a specimen recut, an immunohistochemical stain, additional diagnostic testing, additional consultation, and/or a special stain.

4. The computer-implemented method of claim 1, wherein the label comprises a diagnostic feature of the target electronic image, the diagnostic feature comprising at least one of cancer presence, cancer grade, treatment effects, precancerous lesions, biomarkers for treatment selection, and/or presence of infectious organisms.

5. The computer-implemented method of claim 1, wherein the prioritization value of the target electronic image comprises a first prioritization value of the target electronic image for a first user and a second prioritization value of the target electronic image for a second user.

6. The computer-implemented method of claim 1, wherein the prioritization value of the target electronic image comprises a first prioritization value of the target image for a first user and a second prioritization value of the target electronic image for a second user, and
wherein the first prioritization value is determined based on the first user's preferences and the second prioritization value is determined based on the second user's preferences.

7. The computer-implemented method of claim 1, wherein the label comprises an artifact label corresponding to at least one of scanning lines, missing tissue, and/or blur.

8. A system for processing an electronic image corresponding to a specimen and automatically prioritizing processing of the electronic image, the system comprising:
- at least one memory storing instructions; and
 - at least one processor configured to execute the instructions to perform operations comprising:
 - receiving a target electronic image of a slide corresponding to a target specimen, the target specimen comprising a tissue sample of a patient;
 - computing, using a machine learning system, a prioritization value of the target electronic image, the machine learning system having been generated by processing a plurality of training images, each training image comprising an image of human tissue and a label characterizing at least one of a slide morphology, a diagnostic value, a pathologist review outcome, and/or an analytic difficulty; and
 - outputting a sequence of digitized pathology images, wherein a placement of the target electronic image in the sequence is based on the prioritization value of the target electronic image.
9. The system of claim 8, wherein the label comprises a preparation value corresponding to a likelihood that further preparation is to be performed for the target electronic image.
10. The system of claim 8, wherein the label comprises a preparation value corresponding to a likelihood that further preparation is to be performed for the target electronic image, and

wherein the further preparation is performed for the target electronic image based on at least one of a specimen recut, an immunohistochemical stain, additional diagnostic testing, additional consultation, and/or a special stain.

11. The system of claim 8, wherein the label comprises a diagnostic feature of the target electronic image, the diagnostic feature comprising at least one of cancer presence, cancer grade, treatment effects, precancerous lesions, biomarkers for treatment selection, and/or presence of infectious organisms.

12. The system of claim 8, wherein the prioritization value of the target electronic image comprises a first prioritization value of the target electronic image for a first user and a second prioritization value of the target electronic image for a second user.

13. The system of claim 8, wherein the prioritization value of the target electronic image comprises a first prioritization value of the target image for a first user and a second prioritization value of the target electronic image for a second user, and

wherein the first prioritization value is determined based on the first user's preferences and the second prioritization value is determined based on the second user's preferences.

14. The system of claim 8, wherein the label comprises an artifact label corresponding to at least one of scanning lines, missing tissue, and/or blur.

15. A non-transitory computer-readable medium storing instructions that, when executed by at least one processor, cause the at least one processor to perform a method for processing an electronic image corresponding to a specimen and automatically prioritizing processing of the image, the method comprising:

receiving a target electronic image of a slide corresponding to a target specimen, the target specimen comprising a tissue sample of a patient;

computing, using a machine learning system, a prioritization value of the target electronic image, the machine learning system having been generated by processing a plurality of training images, each training image comprising an image of human tissue and a label characterizing at least one of a slide morphology, a diagnostic value, a pathologist review outcome, and/or an analytic difficulty; and

outputting a sequence of digitized pathology images, wherein a placement of the target electronic image in the sequence is based on the prioritization value of the target electronic image.

16. The non-transitory computer-readable medium of claim 15, wherein the label comprises a preparation value corresponding to a likelihood that further preparation is to be performed for the target electronic image.

17. The non-transitory computer-readable medium of claim 15, wherein the label comprises a preparation value corresponding to a likelihood that further preparation is to be performed for the target electronic image, and

wherein the further preparation is performed for the target electronic image based on at least one of a specimen recut, an immunohistochemical stain, additional diagnostic testing, additional consultation, and/or a special stain.

18. The non-transitory computer-readable medium of claim 15, wherein the label comprises a diagnostic feature of the target electronic image, the diagnostic feature comprising at least one of cancer presence, cancer grade, treatment effects, precancerous lesions, biomarkers for treatment selection, and/or presence of infectious organisms.

19. The non-transitory computer-readable medium of claim 15, wherein the prioritization value of the target electronic image comprises a first prioritization value of the target electronic image for a first user and a second prioritization value of the target electronic image for a second user.

20. The non-transitory computer-readable medium of claim 15, wherein the prioritization value of the target electronic image comprises a first prioritization value of the target image for a first user and a second prioritization value of the target electronic image for a second user, and

wherein the first prioritization value is determined based on the first user's preferences and the second prioritization value is determined based on the second user's preferences.