

Appendix

Terminology

Computational pathology and digital pathology

The terms “computational pathology” and “digital pathology” are used interchangeably, which can often lead to confusion in different contexts¹. Despite the overlap, we propose to use the term digital pathology in the context of using digitalised WSI, which include multiple stages from scanning, viewing and storage of images, linked software and any integrated AI tools. Therefore, digital pathology can be used to describe the process of transforming histopathology slides into digital images using high throughput scanners and subsequent analysis and interpretation of these digitised images. Computational pathology, on the other hand, should be used to define the wider application of computational technology and other big data approaches in pathology including automation, robotics, voice recognition tools and other similar computer aided technologies in addition to WSI technology. Although some authors^{1,2} defined computational pathology as follows: *“An approach to diagnosis that incorporates multiple sources of raw data (eg, clinical electronic medical records, laboratory data including “-omics,” and imaging [both radiology and pathology imaging]); extracts biologically and clinically relevant information from these data; uses mathematic models at the molecular, individual, and population levels to generate diagnostic inferences and predictions; and presents this clinically actionable knowledge to customers through dynamic and integrated reports and interfaces, enabling physicians, patients, laboratory personnel, and other health care system stakeholders to make the best possible medical decisions”*, we believe this definition is best suited to the use of AI in pathology rather than to computational pathology.

References

- 1 Louis, D. N., Gerber, G. K., Baron, J. M., Bry, L., Dighe, A. S., Getz, G. *et al.* Computational Pathology: An Emerging Definition. *Arch Pathol Lab Med* **138**, 1133-1138 (2014).
- 2 Louis, D. N., Feldman, M., Carter, A. B., Dighe, A. S., Pfeifer, J. D., Bry, L. *et al.* Computational Pathology: A Path Ahead. *Arch Pathol Lab Med* **140**, 41-50 (2016).