Digital Pathology: Clinical Implementation in Neuropathology

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Case-Based Questions (please see page 3 for answers)

1.	Your institution is considering digitization of pathology assets for routine surgical pathology interpretation. As a first step, and as proof of concept, they have decided to digitize assets that are presented at Brain Tumor Board (BTB), which have a relatively low volume and could help identify initial operational pain points. What will be the next step after creating a group of stakeholders, implementing initial procedures, standards and measurable outcomes?	
	a.	Purchase a scanner that will serve to digitize BTB slides
	b.	Mapping the current BTB workflow
	c.	Train pathologists on how to use software to present cases at BTB
	d.	Hire personnel to scan slides for BTB

2.	You are taking part in a validation study to implement neuro frozen section interpretation using whole slide images (WSI) instead of glass slides. You have now reviewed the first set of glass slides. How many days should pass before you review the WSIs, based on the recommended CAP guidelines?	
	a.	5 days
	b.	8 days
	c.	13 days
	d.	18 days

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Correct Answers and Rationales

Question 1 Correct Answer and Rationale: **B. Mapping the current BTB workflow**

Rationale: The next step after defining the scope of the project is to map and understand the current workflow. This will include learning and understanding how assets are currently requested, retrieved and presented at conference. One cannot move forward without understanding the current workflow The group will need to first determine if the workflow needs to be redesigned to facilitate the next steps of the digital implementation.

Question 2 Correct Answer and Rationale: **D. 18 days**

Rationale: The CAP guidelines for validating WSI systems for diagnostic purposes include:

1. Validation should include a sample set of at least 60 cases for each application use (e.g. H&E form FFPE, or H&E from Frozen section, or Pap-stained slides for hematology)
2. Validation should include another 20 cases for additional applications, such as immunohistochemistry or special stains if applicable for the intended specimen type and application use, that were not included in the 60 cases mentioned above.
3. Validation study should establish the validation concordance between digital and glass slides for the same observer. If validation concordance is <95%, laboratories should investigate and attempt to remedy the cause.
4. A washout period of at least two weeks between reviewing the digital slides and the glass slides.