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OMS Atlas FFPE Spatial Mapping

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1 Works for me dx.doi.org/10.17504/protocols.io.4avgse6

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ABSTRACT

This protocol describes the procedure by which the OMS Atlas serially sections a FFPE block, prepares the resulting slides, and then distributes the specimens for downstream analysis.

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KEYWORDS

biospecimen, FFPE, tissue processing, spatial mapping

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24629

MATERIALS TEXT

MATERIALS

 [Tanner Scientific 45° White Adhesive Slide with Beveled Edge Mercedes](#)

Medical Catalog #TNR WHT45AD

Additional equipment:

- Microtome

ABSTRACT

This protocol describes the procedure by which the OMS Atlas serially sections a FFPE block, prepares the resulting slides, and then distributes the specimens for downstream analysis.

BEFORE STARTING

Transfer FFPE blocks to OHSU Knight Histopathology Shared Resource (HSR) for sectioning and processing.

Preparation

- 1 Verify the identity of the FFPE block to be cut against written request for sectioning.
- 2 Label each Tanner slide with a unique BEMS ID and slide number, corresponding to the written request and FFPE spatial map (below).

Note: Slides #1-4 compose the official OMS Atlas Dataset.

Slide#	Assay	Recipient
1	H&E	OHSU, HSR
2	Cyclic Immunofluorescence (Tumor Panel)	HMS, Alyce Chen
3	Cyclic Immunofluorescence (Immune Panel)	HMS, Alyce Chen
4	Multiplex IHC (Discovery Panel)	OHSU, Courtney Betts
5	Cyclic Immunofluorescence	OHSU, Koei Chin
6	H&E	OHSU, HSR
7	Quantitative Intracellular Signaling Panel (Nanostring)	OHSU, KDL
8	Quantitative Intracellular Signaling Panel (Nanostring)	OHSU, KDL

Sectioning

- 3 Align block on microtome to minimize tissue loss.
- 4 Face into block at 5µm until full section of tissue is achieved.
- 5 Cut adequate ribbon at 5µm to cover all 10 serial sections.
- 6 Mount tissue sections onto Tanner slides to maintain serial order and orientation of sections.

Processing

- 7 Perform hematoxylin and eosin (H&E) staining on slides #1 and #8.
- 8 Bake slides #2 through #7.

- 8.1 Place slides #2 through #7 in 🔥 **55 °C** oven overnight.
- 8.2 The next morning, raise the oven temperature to 🔥 **65 °C** for up to ⌚ **01:00:00** .
*Note: Slides should be baked at 🔥 **65 °C** for at least 30 minutes.*
- 8.3 Remove slides from oven and deliver to Biolibrary for distribution.