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# OMS Atlas FFPE Spatial Mapping V.3

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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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**protocols.io**

<https://protocols.io/view/oms-atlas-ffpe-spatial-mapping-b9nqr5dw>

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biospecimen, FFPE, tissue processing, spatial mapping

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## MATERIALS

 Tanner Scientific 45° White Adhesive Slide with Beveled Edge Mercedes

Medical Catalog #TNR WHT45AD

Additional equipment:

- Microtome

Transfer FFPE blocks to OHSU Knight Histopathology Shared Resource (HSR) for sectioning and processing. Coordinate execution of this sectioning protocol to allow for shipping within the same business week.

## 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).

A	B	C
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, Sam Sivagnanam
5	Cyclic Immunofluorescence (Panel A)	OHSU, Koei Chin
6	Cyclic Immunofluorescence (Panel B)	OHSU, Koei Chin
7	Nanostring GeoMx Digital Spatial Profiler	OHSU, KDL
8	H&E	OHSU, HSR

### 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 8 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. Place slides in slide boxes and store at room temperature.

9 Deliver slides #2 through #7 to BioLibrary for distribution.