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Version 5

OMS Atlas FFPE Spatial Mapping V.5

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Protocol status: Working

We use this protocol and it's working

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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.

Materials

MATERIALS

✂ Tanner Scientific 45° White Adhesive Slide with Beveled Edge **Mercedes Medical Catalog #TNR WHT45AD**

✂ Superfrost Plus Microscope Slides **Fischer Scientific Catalog #12-550-15**

Additional equipment:

- Microtome

Before start

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 all slides with a unique BEMS ID and slide number, corresponding to the written request and FFPE spatial map (below).

	A	B	C	D
	Slide #	Slide Type	Assay	Recipient
	1	Superfrost Plus	H&E	OHSU, HSR
	2	Superfrost Plus	Cyclic Immunofluorescence (Tumor Panel)	HMS, Alyce Chen
	3	Superfrost Plus	Cyclic Immunofluorescence (Immune Panel)	HMS, Alyce Chen
	4	Tanner	Multiplex IHC (Discovery Panel)	OHSU, Sam Sivagnanam
	5	Tanner	Cyclic Immunofluorescence (Panel A)	OHSU, Koei Chin
	6	Tanner	Cyclic Immunofluorescence (Panel B)	OHSU, Koei Chin
	7	Superfrost Plus	Nanostring GeoMx Digital Spatial Profiler	OHSU, KDL
	8	Superfrost Plus	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, 3, 5, and 6.

8.1 Place slides #2, 3, 5, and 6 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.