

Oct 27, 2020 Version 1

OMS Atlas FFPE Spatial Mapping V.1

DOI

dx.doi.org/10.17504/protocols.io.4avgse6

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DOI: dx.doi.org/10.17504/protocols.io.4avgse6

Protocol Citation: Brett Johnson, Danielle Galipeau, Todd Camp, George Thomas 2020. OMS Atlas FFPE Spatial Mapping. [protocols.io](https://dx.doi.org/10.17504/protocols.io.4avgse6) <https://dx.doi.org/10.17504/protocols.io.4avgse6>

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Protocol status: Working

Created: June 17, 2019

Last Modified: October 27, 2020

Protocol Integer ID: 24629

Keywords: biospecimen, FFPE, tissue processing, spatial mapping

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**

Additional equipment:

- Microtome

Before start

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	OHS U, HSR
2	Cyclic Immunofluorescence (Tumor Panel)	HMS, Alyce Chen
3	Cyclic Immunofluorescence (Immune Panel)	HMS, Alyce Chen
4	Multiplex IHC (Discovery Panel)	OHS U, Courtney Betts
5	Cyclic Immunofluorescence	OHS U, Koei Chin
6	H&E	OHS U, HSR
7	Quantitative Intracellular Signaling Panel (Nanostring)	OHS U, KDL
8	Quantitative Intracellular Signaling Panel (Nanostring)	OHS U, 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 5 μ m 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.