Initial Rapid Pathology Assessment of Kidney Tissue

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ABSTRACT
Scope:
Prepare formalin fixed tissue with freezing fresh tissue protocol (dx.doi.org/10.17504/protocols.io.6wghfbw).

This protocol provides the steps to prepare formalin fixed human kidney tissue and perform histology assessment for normalcy.

Expected Outcome:
Pathological assessment of kidney tissue for use in LC-MS/MS and imaging.

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KEYWORDS
HuBMAP, Kidney, Quality Assessment, PAS

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Once fixed (dx.doi.org/10.17504/protocols.io.6wghfbw) take tissue to pathology Core for paraffin embedding.

Section samples at 5 µm.
PAS stain tissue sections (dx.doi.org/10.17504/protocols.io.4qngvve).

Scan slides with brightfield scanner (Leica) and save as .tiff or .jpg.

Place saved images on QuPath for analysis.

Assess and record the following information for each tissue:

- cortex and medulla (%):
- Pyramid Presence, Autolysis, Non-Renal disease (i.e. cancer)
- Glomerular disease, Tubulointerstitial disease (0=None – 3=Severe)

Based on FFPE assessment, kidneys will be used accordingly:

LC-MS/MS normalcy:
- low or no glomerular disease, and 75% or more cortex for normal
- 100% tumor for diseased

3D Imaging:
- 50:50 cortex:medulla
- low or no glomerular disease
- no renal disease