nPOD Online Pathology 101

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Welcome

- Asking questions:
  - Welcome at any step- others likely have the same
  - How- webinar chat function send to all-
    - If I don't read your question, talk

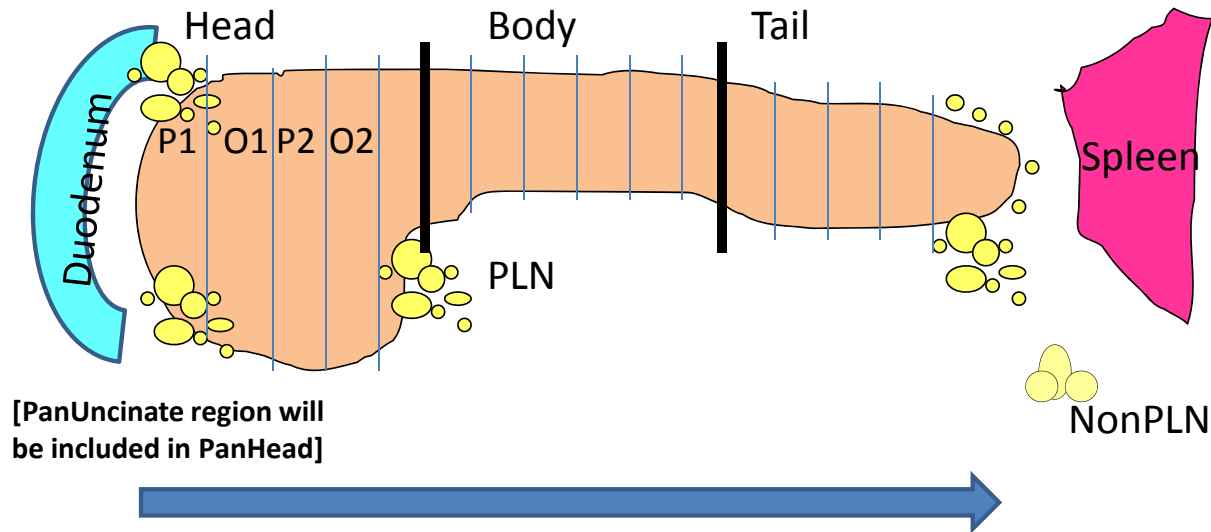- Please mute your phones to avoid background noise- use mute button or *69

Best Viewing

- Browser: Microsoft Internet Explorer
  - Known issues with Chrome and Firefox
- For access: see [JDRF nPOD/For Investigators/Online Pathology Information](#)
  - Users limited to those in research
  - Internet security requires individual accounts with no sharing
- Webinar available on the webpage

Digital Pathology Primer

- Background: Case Processing
  - Histology and IHC
  - Pathology Review
- Spectrum: Information Management System
  - Cases- Specimens - Slides
  - Advanced searches
  - Export data
  - Take photos
  - Link H&E and IHC images

Case Processing

Head   Body   Tail

Duodenum

P1 O1 P2 O2

Spleen

PLN

NonPLN

[PanUncinate region will be included in PanHead]

Pancreas: head, body, and tail

    Paraffin blocks- 5-10 (OCT takes precedence over fixed when sample size is small)

    OCT blocks- 5-10 all regions or as indicated by size

PLN:

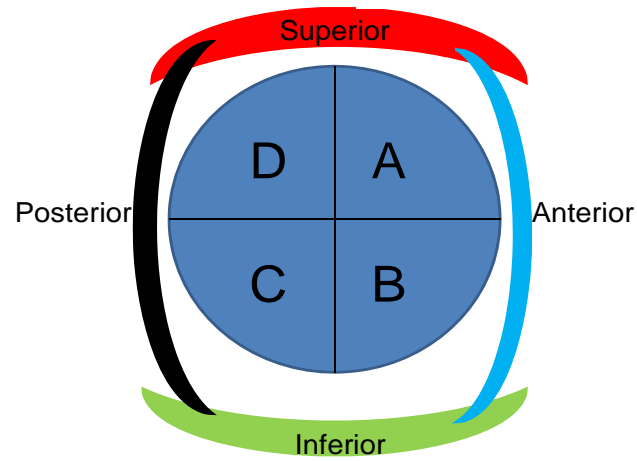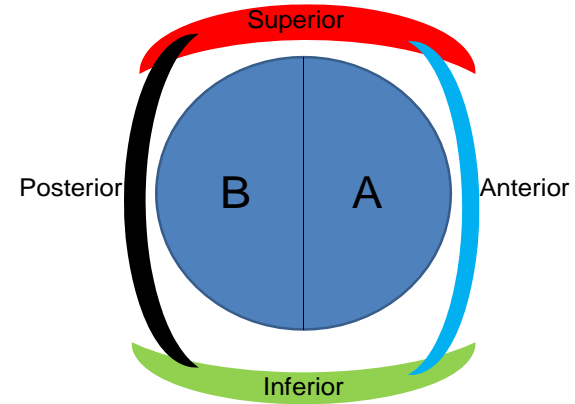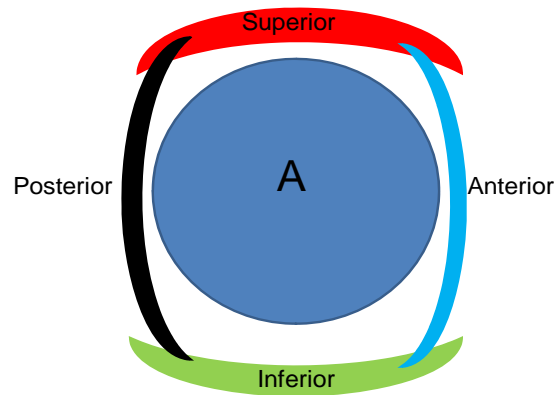   OCT blocks – 3-5- as many as feasible depending on total numbers

    Cells- place several dissected LNs in 15ml tubes containing sterile RPMI, hold at refrigeration until shipped or processed. 1-4 tubes depending on numbers

    Frozen vials as for pancreas. Paraffin is optional.

Spleen and NonPLN: as for PLN.

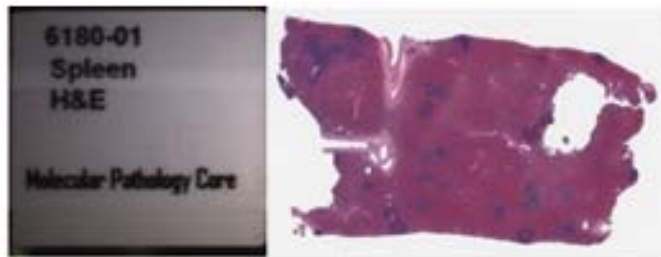Duodenal mucosa: as for pancreas.

Pancreas Subsections

Standard Histology and IHC

3-4 unstained serial Sections/block, 4um	Blocks 02A, 04A PanHead 02A, 04A PanBody, Tail 01 Spleen 01 Bone Marrow, Lesion(s)
H&E	1. H&E
IHC	2. Ki67+Insulin 3.CD3+Glucagon 4. PP (PanHead only)
Slide scanning	All stained slides

nPOD Slide Labels

Original Labels

Case ID
Block Number
Sample ID
Stain

Current Labels

Case ID = 6189
Block Number= 01
Sample ID= Spleen
Stain = H&E

Within 2D code:
    Slide Number
    Aliquot ID (paraffin or OCT)
    Date

Case Information

CaseID: 6070

Group: T1D — "Pending" until lab data returned

AutoAb (Denver): IA-2A+ mIAA+ — Denver Autoantibody Core (G. Eisenbarth)

Age (years): 22.6 (7 w/diabetes)

Gender: Female

Ethnicity: Caucasian

C-peptide (ng/ml): <0.05 — Northwest Lipid Research (S. Marcovina)

HbA1c:

UNOS_BMI: 21.6

ClinicalHistory: — "Accepted as" information, other

Histopathology: Ins+ islets (few); occ. Ki67+ islet cell. CD3+ Insulitis. Alternating blocks can be devoid of beta cells. — Synopsis of findings starting with islets

HiRes HLA: A*0201, 0205 B*3801, 5801 C*0701, 1203 DRB1*1001, 1601 DQA1*0101, 0102 DQB1*0501, 0502 DPA1*0103, 0201 DPB1*1301, 1401 — Oakland Children's (J. Noble)

Transplant HLA: A*02/02, B*38/58, DRB1*10/16, DQB1*05/05 — From chart

UNOS HLA Class I : A1*02; B1*38; Cw1*07; A2*No second antigen detected; B2*58; Cw2*07; Bw4+; Bw6-

UNOS HLA Class II : DR1*10; DQ1*05; DPw1*Not Tested; DR2*16; DQ2*No second antigen detected; DPw2*Not Tested; DR51+; DR52-; DR53-;

UNOS- Data uploaded via Data Management Core (J. Kaddis)

Case Searches

Histopathology Searches

Specimens = Tissues = SampleID

Case Specimens
View Images | Open Data

		Icon	Image	ID ↓	SampleID	Subproject	Comment
⊟	☐	🧠	n/a	1998	PanHead		

View Images | Open Data

	Icon	Label	Image	Slide ID	Block ID	CaseID	Block #	Slide_Number	SampleID	Stain	Aliquot ID	Date	Comment	Analys
☐	✎			51316		6189	02A	01	PanHead	H&E	Paraffin	3/20/12		
☐	✎			51317		6189	04A	01	PanHead	H&E	Paraffin	3/20/12		
☐	✎			51449		6189	02A	06	PanHead	No primary	Paraffin	3/22/12		
☐	✎			51364		6189	02A	02	PanHead	Ki67+Insulin	Paraffin	3/22/12		
☐	✎			51375		6189	04A	02	PanHead	Ki67+Insulin	Paraffin	3/22/12		
☐	✎			51354		6189	02A	05	PanHead	Pan Polypeptide	Paraffin	3/22/12		
☐	✎			51356		6189	02A	03	PanHead	CD3+Glucagon	Paraffin	3/22/12		
☐	✎			51357		6189	04A	03	PanHead	CD3+Glucagon	Paraffin	3/22/12		

50

		Icon	Image	ID	SampleID		
⊞	☐	🧠	n/a	1997	PanBody		
⊞	☐	🧠	n/a	1996	PanTail		
⊞	☐	🧠	n/a	1995	Spleen		

Slide Information

Modify Search Criteria

Search For Cases ▾

⊞ The Case Fields

⊞ The Specimen Fields

⊞ The Digital Slide Fields

Slide ID
Block ID
CaseID
Block #
Slide_Number
SampleID
Stain
Aliquot ID
Date
Comment
Analysis Progress

Save

[Save] [Delete]

an asterisk (*) will prompt for modification before execution

Specimen & Slide Searches

Load Saved Search (Optional)

-- Select --   [Load]

Modify Search Criteria

Search For   Digital Slides

⊞ The Case Fields

⊞ The Specimen Fields

⊟ SampleID   equal to   PanBody

⊞ The Digital Slide Fields

⊟ Comment   contains   insulitis

[Search]   [Clear]

Save Search (Optional)

Save Search Criteria as   [   ]   [Save]   [Delete]

Note - search names containing an asterisk (*) will prompt for modification before execution

WebScope- Macs or Default PC
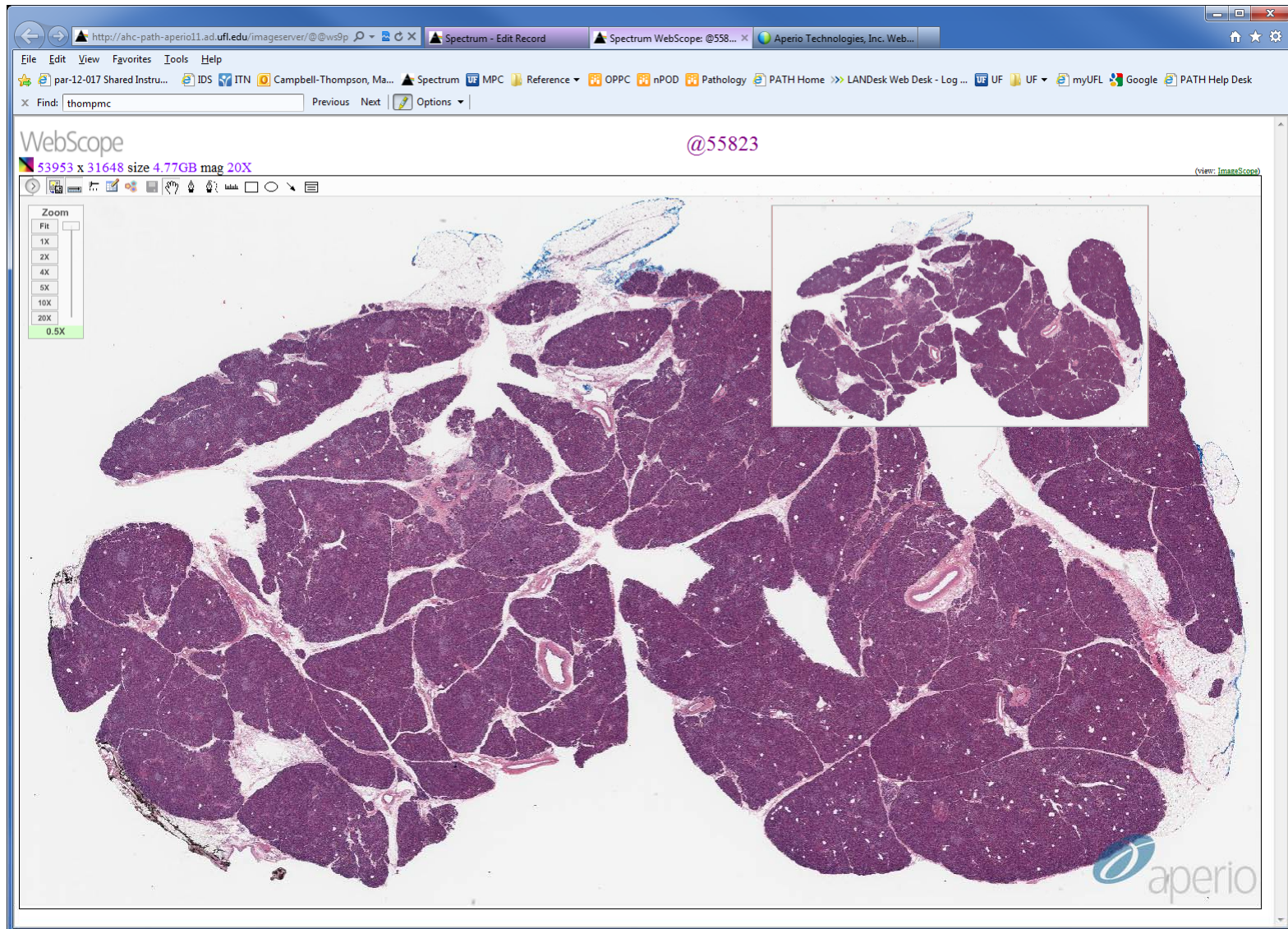
ImageScope
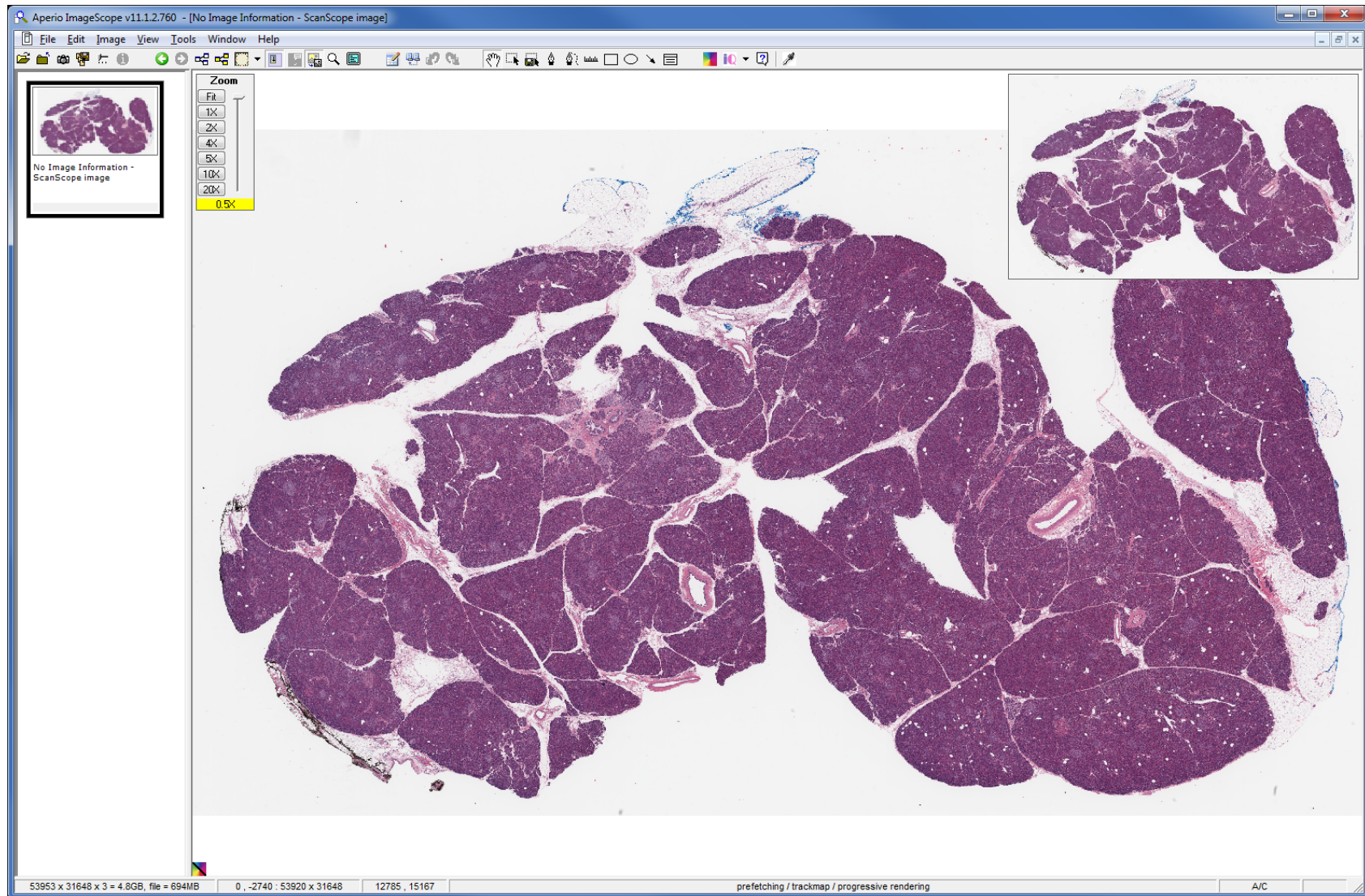
iPhone, iPad

Aperio® ePathViewer Enables Easy Access to eSlides

The Aperio ePathViewer application allows mobile access to eSlide images from stored pathology data sets and is designed for optimal use with the iPad® mobile digital device, iPad2® mobile digital device, and the new iPad® mobile digital device. A separate app is available for use on the iPhone® 4 mobile digital device and iPhone® 4S mobile digital device.

The application was carefully developed to provide important capabilities to support remote viewing for ePathology slides. Users can select images from active thumbnails of eSlide images, adjust the fixed magnification up to the maximum from the original scan, and display eSlide metadata. In addition, the current view snapshot can be emailed if needed.

For quick reference, the application has built-in default websites, including the Juan Rosai Collection of Surgical Pathology Seminars, as well as Aperio sample images from College of American Pathologists (CAP).

For ease of use, a single tap toggles the display of an image set, toolbar, image label, thumbnail and color balance. More instructions on use are available below.

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Call Me*:   ○ Yes ○ No

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