

Utilization of Biospecimens and Associated Clinical Annotations: Common obstacles and solutions for translational research

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Objectives

- Highlight some of the advantages and challenges of utilizing large clinical data from various electronic systems.
 - Data mining of Anatomic Pathology reports
 - Integration of Cancer Registry data (NAACCR exports)
- Highlight some of the data mining and informatics tools developed recently to link large clinical data sets from eClinical Information Systems with biospecimens.
- Highlight the increase demand for robust biospecimen annotation that is structured data and searchable for supporting disease specific translational research groups.
- WILL NOT COVER:
 - Honest Broker Processes
 - Data mining of Clinical Trails Systems, etc
 - Issues related to informatics infrastructures (administrative) supporting retrospective studies (i.e. IRB/consent tracking, etc)

Research Scenario # 1

General Research Question

Research Scenario

I want to study biomarker **X**, which helps predict treatment options for “Aggressive” **X** cancer.

Can we use this biomarker **X** to help patients that are diagnosed with “intermediate” grade of **X** cancer?

Will compare “intermediate” vs “high” grade **X** cancer tissues as well as “normal” tissue.

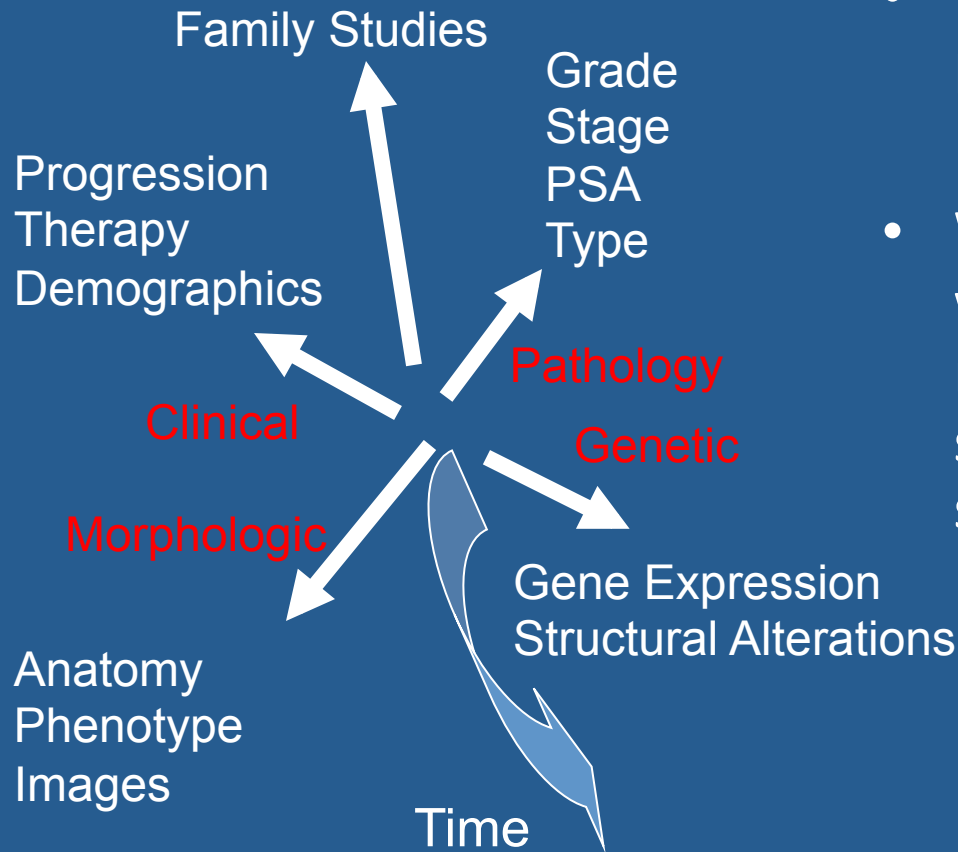
What are some of the variables that may affect your research results?

Where can we find the clinical information?

What is the source of this clinical data?

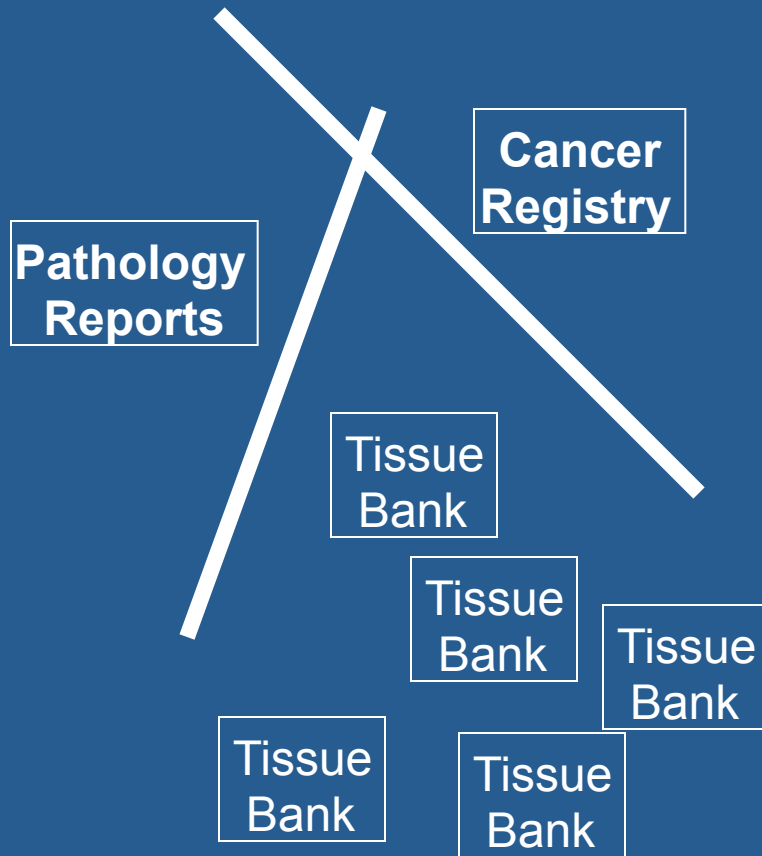
Does your biobank have this information?

Tissue Annotation



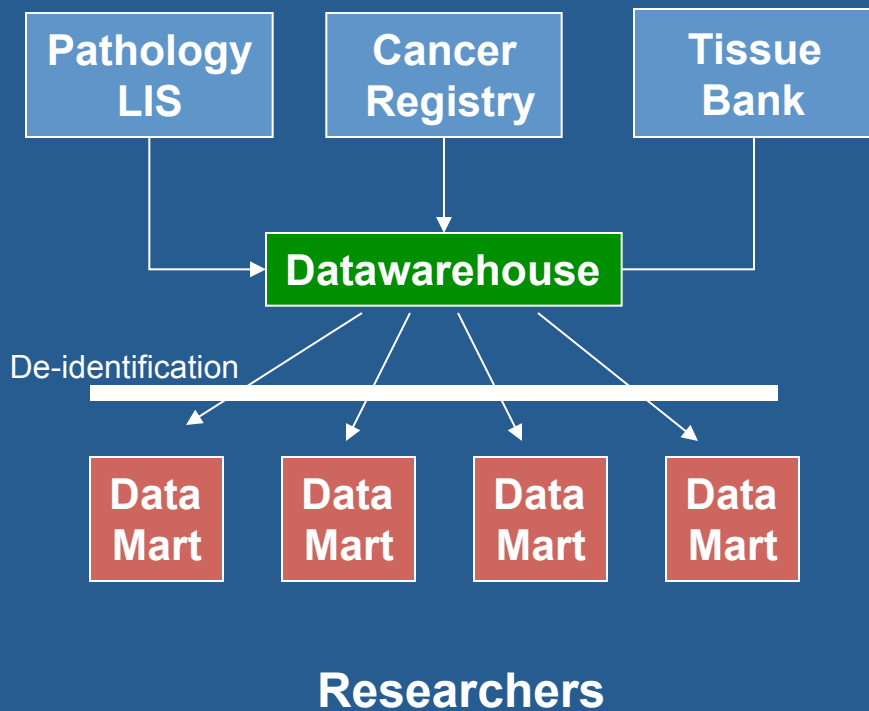
- Tissue Data is complex and, potentially infinite...
- What data is “relevant”, what data is useful to researchers when they are searching for tissue specimens?

Tissue Annotation



- The basic tissue information researchers wanted was routinely produced in the hospital, but it was not in an accessible, useful form:
- **Pathology** - Clinical reports: free text, non-standard, incomplete, identified
- **Cancer Registry** - Demographic and **follow up data** but was “out of the loop”
- **Tissue Banks** - No central bank, No access to tissue bank information systems, very limited annotation

Tissue Annotation



- Clinical Annotation Engine Project
- To modify **existing operational, systems** to provide annotated tissue for research
- Create a research data warehouse in which data will reside in common data elements
- Create a de-identification layer
- Create a series of organ based data marts that could provide relevant tissue data directly to researchers

Matching biospecimens to your study is not that simple!!!!

Specimen Collection



Send specimens to pathology lab



Send specimens to Biobank





Multiple pre-analytical variables can affect the molecular integrity of the biospecimen

OBBR Office of Biorepositories and Biospecimen Research

Variables (examples):

- Antibiotics
- Other drugs
- Type of anesthesia
- Duration of anesthesia
- Arterial clamp time

Time 0

Variables (examples):

- Time at room temperature
- Temperature of room
- Type of fixative
- Time in fixative
- Rate of freezing
- Size of aliquots



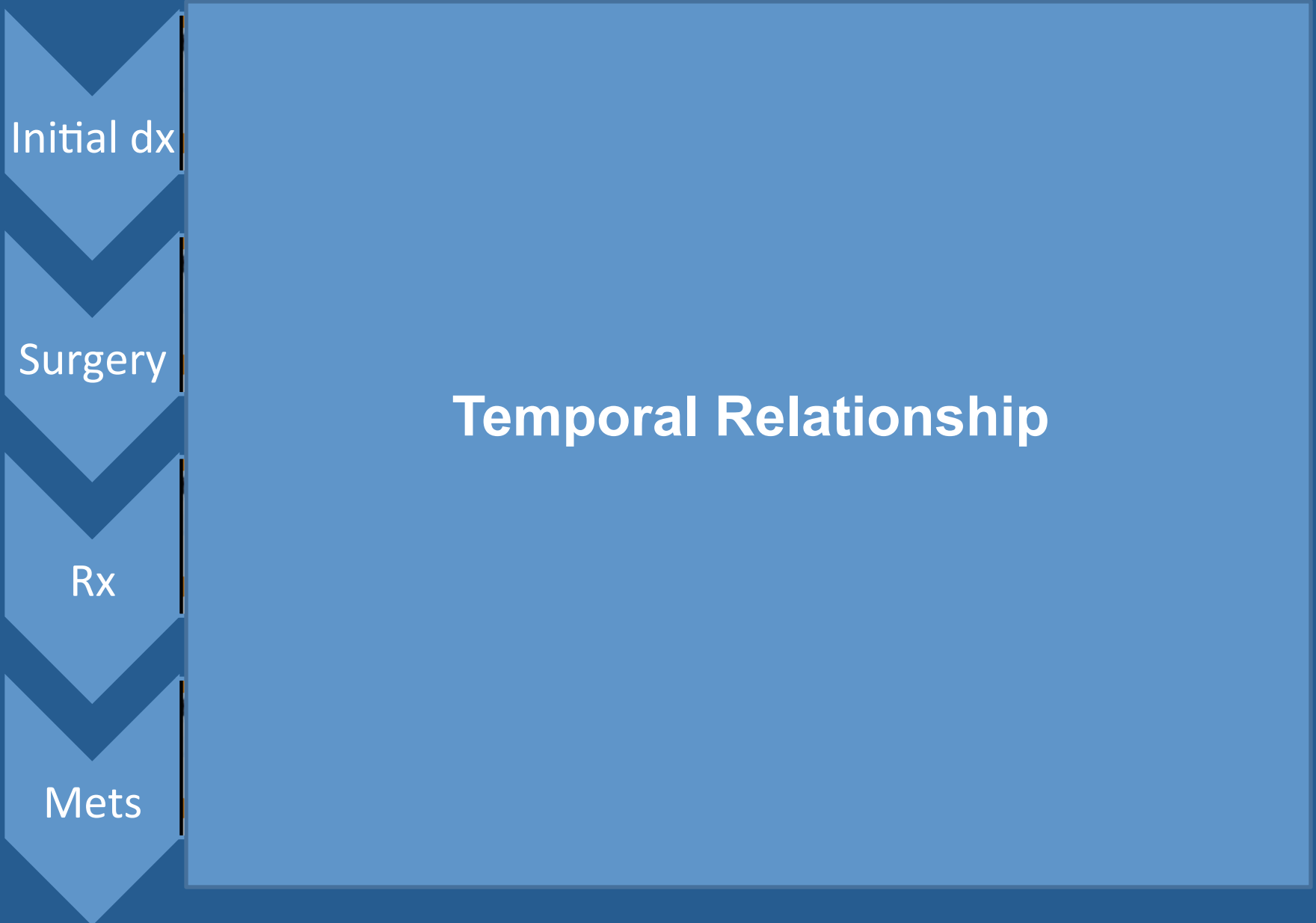
Pre-acquisition

Post-acquisition

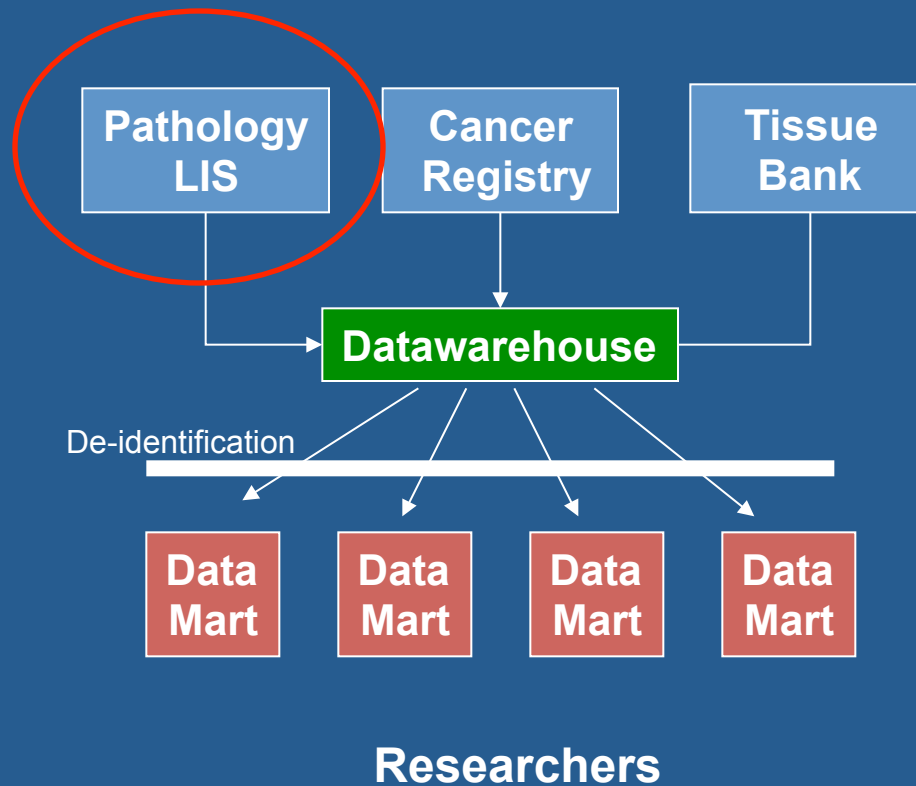
The Lifecycle of the Biospecimen



Are all the biospecimens the same?

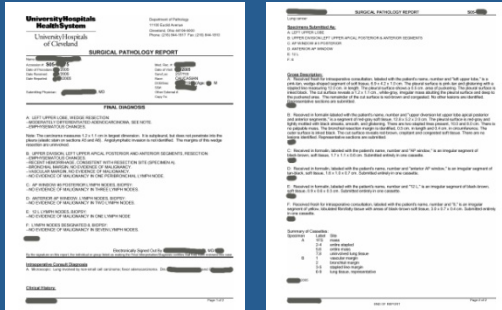


Clinical Annotation Engine Project

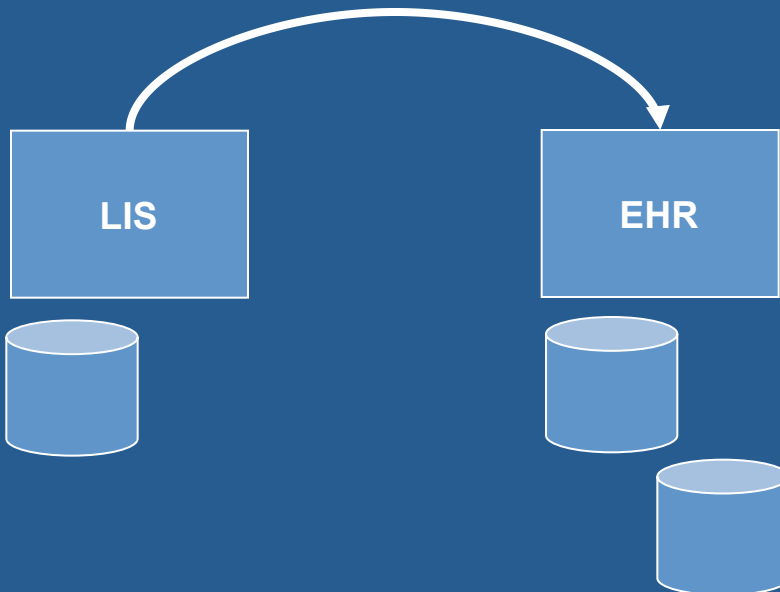


Anatomic Pathology Report

General Comments



- The AP report is a signed document, not a database to database transaction.
- It has been designed for a specific purpose (even though it is used for many others)
- It is a communication between physicians
- It is an “identified document” in the header and in the text
- Used by caTIES, I2B2 and others for identifying cohorts



Data NOT found on “Final” Pathology Report

- Pathology descriptions and diagnosis

+

- histology processing and inventory data at the part, block and slide level



- LIS that can act as a massive tissue banking system, with data associated directly with specimens.

Histology Data
Part A: LEFT UPPER LOBE
Taken: [redacted]/2005 [redacted] Received: [redacted]/2005 [redacted] All Pieces

Block	PCs	Status	Comment
1	1	Batch	
2	1	Batch	
3	1	Batch	
4	1	Batch	
5	1	Batch	
6	1	Batch	
7	1	Batch	
8	1	Batch	

Stain/cnt

Stain/cnt	Block	Ordered	Status	Comment
Frozen Section x 1	1	[redacted]/2005 09:40 /	Verified	
H&E (1) x 1	1	[redacted]/2005 09:40 /	Verified	
H&E (1) x 1	2	[redacted]/2005 13:16 /	Verified	
H&E (1) x 1	3	[redacted]/2005 13:16 /	Verified	
H&E (1) x 1	4	[redacted]/2005 13:16 /	Verified	
Elastic x 1	5	[redacted]/2005 16:51 /	Verified	
H&E (1) x 1	5	[redacted]/2005 13:16 /	Verified	
Elastic x 1	6	[redacted]/2005 16:51 /	Verified	
H&E (1) x 1	6	[redacted]/2005 13:16 /	Verified	
H&E (1) x 1	7	[redacted]/2005 13:16 /	Verified	
H&E (1) x 1	8	[redacted]/2005 13:16 /	Verified	

Part B: UPPER DIVISION LEFT UPPER APICAL POSTERIOR & ANTERIOR SEGMENTS
Taken: [redacted]/2005 [redacted] Received: [redacted]/2005 [redacted] All Pieces Used? N

Block	PCs	Status	Comment
1	1	Batch	
2	1	Batch	
3	1	Batch	
4	1	Batch	
5	1	Batch	
6	1	Batch	
7	1	Batch	
8	1	Batch	
9	1	Batch	

Histology data can be found in discreet data fields for basic information identifying blocks and slides.

Individual slide information can be useful for DICOM & whole slide imaging.

Research Scenario # 2

Lung Tumor with Normal Tissue

Research Scenario

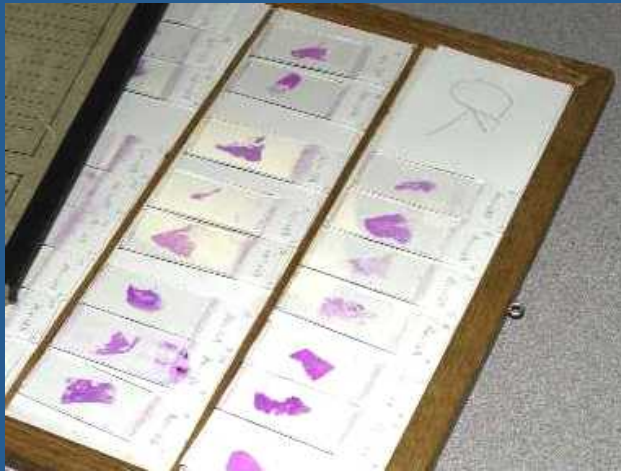
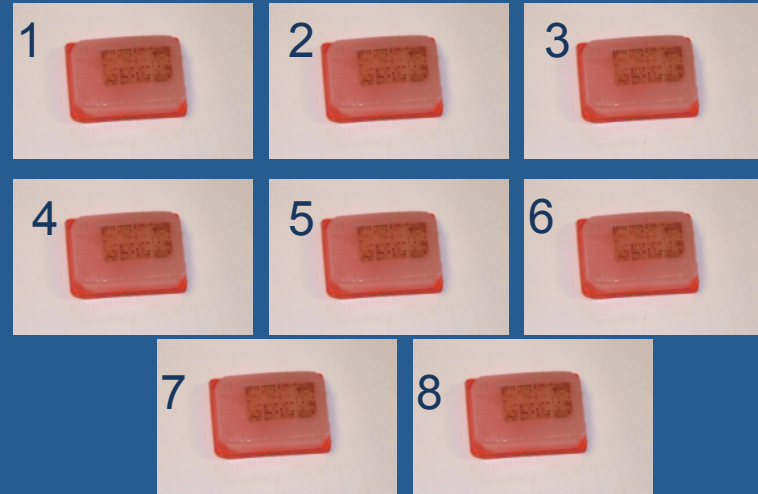
-Research Request: Tissue sections on Adenocarcinoma of the Lung with Adjacent normal sections.

-How do you identify which blocks are representing tumor and “normal” tissues?

“Left upper lobe”



Part A



Summary of Cassettes:

Specimen	Label	Site
A	1FS	mass
	2-4	entire stapled
	5,6	entire mass
	7,8	uninvolved lung tissue
B	1	vascular margin
	2	bronchial margin
	3-5	stapled line margin
	6-9	lung tissue, representative



Surgery



Send specimens to pathology lab

Let's see what type of information is associated with Specimen "A"?

"Left upper lobe"



A

"UPPER DIVISION LEFT UPPER APICAL POSTERIOR & ANTERIOR SEGMENTS"



B

"AP WINDOW # 5 POSTERIOR"



C

"ANTERIOR AP WINDOW"



D

12L



E

8



F

Surgery



Send specimens to pathology lab



Accession/
Log specimen

Gross

Order
blocks/slides

Preliminary Dx./
Ancillary testing

AP Lab Info
System

Final Report

Diagnosis

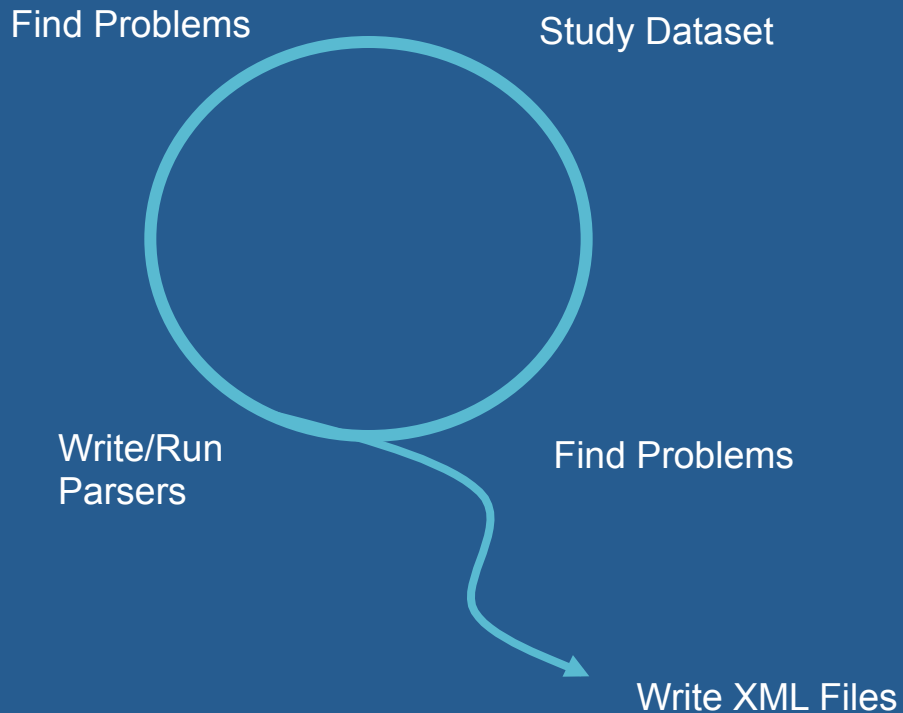
Pathology Data Flow



CASE STUDY
at



Method

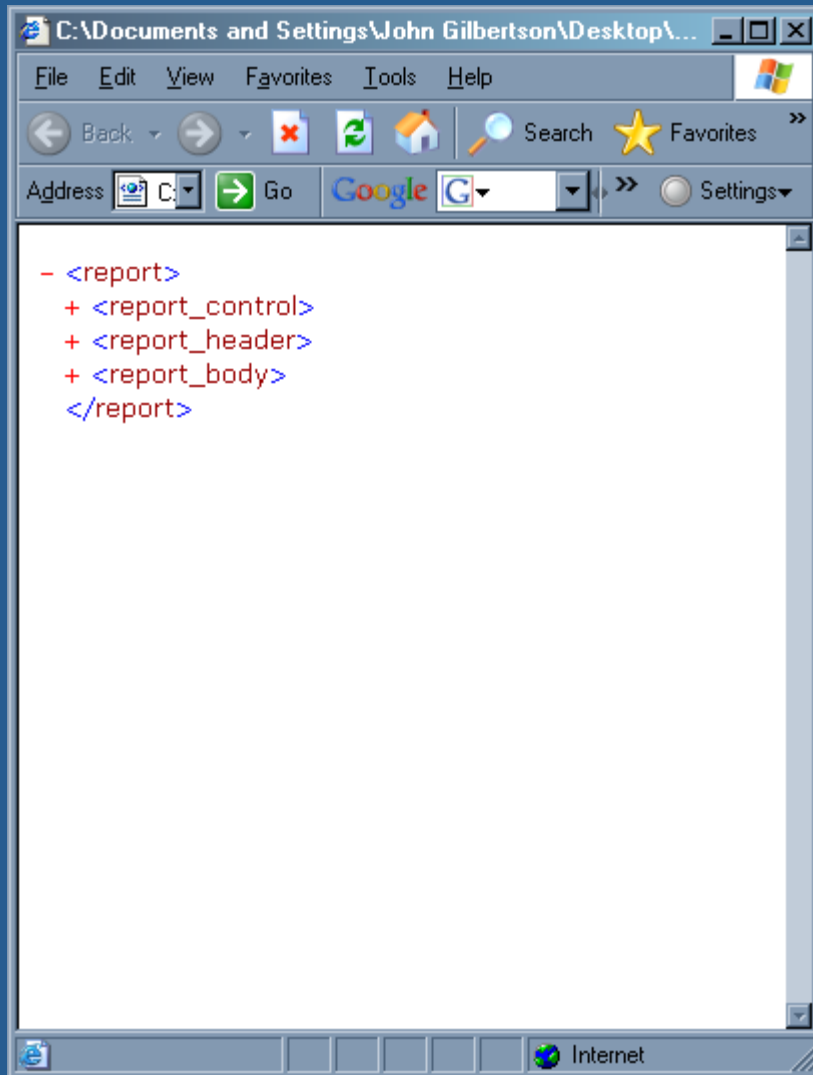


- Identify all variations of specimen and part identifiers in the data set (1995-2011 Surgical Pathology reports)
- Identify all variations in person identifiers in the data set
- Parse identifiers from text and text sections from each other
- Store in an XML file(s)

Creation of XML files

```
<primary-attribute name="part_id" content="A:" line-nbr="0" auto-  
create="false" master-pattern="(^[ ]*[A-Za-z]([-:,& ]*[A-Za-z])*[:,. ])"  
preferred-pattern="(^[A-Z][:])">
```

XML



- A file that acts like a database
- Identifies and separates all data elements
- Makes each element addressable
- Allows easy reconfiguration of the file
- Create child files that that contain a subset of the parent file in any structure you want
- Coding and Structured Data can be included in any XML based report
- One can include links to images or links to lab manuals

Identification of objects and information

SURGICAL PATHOLOGY REPORT

Name: [REDACTED]
Accession #: S05-[REDACTED] 5
Date of Procedure: [REDACTED]/2005
Date Received: [REDACTED]/2005
Date Reported: [REDACTED]/2005
Med. Rec. #: [REDACTED]
Date of Visit: [REDACTED] 2005
Serv/Loc: 237/T03
Race: CAUCASIAN
DOB/Sex: [REDACTED] 19[REDACTED] M
SS#: [REDACTED]
Other External #: [REDACTED]
Cmt. To: [REDACTED]
Submitting Physician: [REDACTED], MD

FINAL DIAGNOSIS

A: LEFT UPPER LOBE, WEDGE RESECTION:
--MODERATELY DIFFERENTIATED ADENOCARCINOMA, SEE NOTE.
--EMPHYSEMATOUS CHANGES.

Note: The carcinoma measures 1.2 x 1.1 cm in largest dimension. It is subpleural, but does not penetrate into the pleura (elastic stain on sections A5 and A6). Angiolymphatic invasion is not identified. The margins of this wedge resection are uninvolved.

B: UPPER DIVISION, LEFT UPPER APICAL POSTERIOR AND ANTERIOR SEGMENTS, RESECTION:
--EMPHYSEMATOUS CHANGES.
--RECENT HEMORRHAGE, CONSISTENT WITH RESECTION SITE (SPECIMEN A).
--BRONCHIAL MARGIN, NO EVIDENCE OF MALIGNANCY.
--VASCULAR MARGIN, NO EVIDENCE OF MALIGNANCY.
--NO EVIDENCE OF MALIGNANCY IN ONE PERIBRONCHIAL LYMPH NODE.

C: AP WINDOW #5 POSTERIOR LYMPH NODES, BIOPSY:
--NO EVIDENCE OF MALIGNANCY IN THREE LYMPH NODES.

D: ANTERIOR AP WINDOW, LYMPH NODES, BIOPSY:
--NO EVIDENCE OF MALIGNANCY IN TWO LYMPH NODES.

E: 12 L LYMPH NODES, BIOPSY:
--NO EVIDENCE OF MALIGNANCY IN ONE LYMPH NODE

F: LYMPH NODES DESIGNATED 8, BIOPSY:
--NO EVIDENCE OF MALIGNANCY IN SEVEN LYMPH NODES.

Electronically Signed Out By [REDACTED], MD/[REDACTED]

Intraoperative Consult Diagnosis

A. Microscopic: Lung involved by non-small cell carcinoma; favor adenocarcinoma. Drs. [REDACTED] and [REDACTED]

Clinical History:

Specimens Submitted As:

- A: LEFT UPPER LOBE
- B: UPPER DIVISION LEFT UPPER APICAL POSTERIOR & ANTERIOR SEGMENTS
- C: AP WINDOW # 5 POSTERIOR
- D: ANTERIOR AP WINDOW
- E: 12 L
- F: 8

Gross Description:

A: Received fresh for intraoperative consultation, labeled with the patient's name, number and "left upper lobe," is a pink-tan, wedge-shaped segment of soft tissue, 6.9 x 4.2 x 1.0 cm. The pleural surface is pink-tan and glistening with a stapled line measuring 12.0 cm. in length. The pleural surface shows a 0.5 cm. area of puckering. The pleural surface is inked black. The cut surface reveals a 1.2 x 1.1 cm., white-gray, irregular mass abutting the pleural surface and deep to the puckered area. The remainder of the cut surface is red-brown and congested. No other lesions are identified. Representative sections are submitted.

B: Received in formalin labeled with the patient's name, number and "upper diversion left upper lobe apical posterior and anterior segments," is a segment of red-gray soft tissue, 12.8 x 5.2 x 2.0 cm. The pleural surface is red-gray and lightly mottled with black streaks, smooth, and glistening. There are two stapled lines present, 10.0 and 8.0 cm. There is no palpable mass. The bronchial resection margin is identified, 0.5 cm. in length and 0.4 cm. in circumference. The outer surface is inked black. The cut surface reveals red-brown, crepitant and congested soft tissue. There are no lesions identified. Representative sections are submitted.

C: Received in formalin, labeled with the patient's name, number and "AP window," is an irregular segment of black-brown, soft tissue, 1.7 x 1.1 x 0.6 cm. Submitted entirely in one cassette.

D: Received in formalin, labeled with the patient's name, number and "anterior AP window," is an irregular segment of tan-black, soft tissue, 1.6 x 1.0 x 0.7 cm. Submitted entirely in one cassette.

E: Received in formalin, labeled with the patient's name, number and "12 L," is an irregular segment of black-brown, soft tissue, 0.9 x 0.6 x 0.3 cm. Submitted entirely in one cassette.

F: Received fresh for intraoperative consultation, labeled with the patient's name, number and "8," is an irregular segment of yellow, lobulated fibrofatty tissue with areas of black-brown soft tissue, 3.0 x 0.7 x 0.4 cm. Submitted entirely in one cassette.

Summary of Cassettes:

Specimen	Label	Site
A	1FS	mass
	2-4	entire stapled
	5-6	entire mass
	7-8	uninvolved lung tissue
B	1	vascular margin
	2	bronchial margin
	3-5	stapled line margin
	6-9	lung tissue, representative

[REDACTED] 2005

A: LEFT UPPER LOBE

Gross Description:

A: Received fresh for intraoperative consultation, labeled with the patient's name, number and "left upper lobe," is a pink-tan, wedge-shaped segment of soft tissue, 6.9 x 4.2 x 1.0 cm. The pleural surface is pink-tan and glistening with a stapled line measuring 12.0 cm. in length. The pleural surface shows a 0.5 cm. area of puckering. The pleural surface is inked black. The cut surface reveals a 1.2 x 1.1 cm., white-gray, irregular mass abutting the pleural surface and deep to the puckered area. The remainder of the cut surface is red-brown and congested. No other lesions are identified. Representative sections are submitted.

A: LEFT UPPER LOBE, WEDGE RESECTION:

- MODERATELY DIFFERENTIATED ADENOCARCINOMA, SEE NOTE.
- EMPHYSEMATOUS CHANGES.

Note: The carcinoma measures 1.2 x 1.1 cm in largest dimension. It is subpleural, but does not penetrate into the pleura (elastic stain on sections A5 and A6). Angiolymphatic invasion is not identified. The margins of this wedge resection are uninvolved.

Summary of Cassettes:

Specimen	Label	Site
A	1FS	mass
	2-4	entire stapled
	5,6	entire mass
	7,8	uninvolved lung tissue

B: UPPER DIVISION LEFT UPPER APICAL POSTERIOR & ANTERIOR SEGMENTS

B: Received in formalin labeled with the patient's name, number and "upper division left upper lobe apical posterior and anterior segments," is a segment of red-gray soft tissue, 12.8 x 5.2 x 2.0 cm. The pleural surface is red-gray and lightly mottled with black streaks, smooth, and glistening. There are two stapled lines present, 10.0 and 8.0 cm. There is no palpable mass. The bronchial resection margin is identified, 0.5 cm. in length and 0.4 cm. in circumference. The outer surface is inked black. The cut surface reveals red-brown, crepitant and congested soft tissue. There are no lesions identified. Representative sections are submitted.

B: UPPER DIVISION, LEFT UPPER APICAL POSTERIOR AND ANTERIOR SEGMENTS, RESECTION:

- EMPHYSEMATOUS CHANGES.
- RECENT HEMORRHAGE, CONSISTENT WITH RESECTION SITE (SPECIMEN A).
- BRONCHIAL MARGIN, NO EVIDENCE OF MALIGNANCY.
- VASCULAR MARGIN, NO EVIDENCE OF MALIGNANCY.
- NO EVIDENCE OF MALIGNANCY IN ONE PERIBRONCHIAL LYMPH NODE.

B	1	vascular margin
	2	bronchial margin
	3-5	stapled line margin
	6-9	lung tissue, representative

C: AP WINDOW # 5 POSTERIOR

C: Received in formalin, labeled with the patient's name, number and "AP window," is an irregular segment of black-brown, soft tissue, 1.7 x 1.1 x 0.6 cm. Submitted entirely in one cassette.

C: AP WINDOW #5 POSTERIOR LYMPH NODES, BIOPSY:
--NO EVIDENCE OF MALIGNANCY IN THREE LYMPH NODES.

C: Received in formalin, labeled with the patient's name, number and "AP window," is an irregular segment of black-brown, soft tissue, 1.7 x 1.1 x 0.6 cm. Submitted entirely in one cassette.

D: ANTERIOR AP WINDOW

D: Received in formalin, labeled with the patient's name, number and "anterior AP window," is an irregular segment of tan-black, soft tissue, 1.6 x 1.0 x 0.7 cm. Submitted entirely in one cassette.

D: ANTERIOR AP WINDOW, LYMPH NODES, BIOPSY:
--NO EVIDENCE OF MALIGNANCY IN TWO LYMPH NODES.

D: Received in formalin, labeled with the patient's name, number and "anterior AP window," is an irregular segment of tan-black, soft tissue, 1.6 x 1.0 x 0.7 cm. Submitted entirely in one cassette.

E: 12 L

E: Received in formalin, labeled with the patient's name, number and "12 L," is an irregular segment of black-brown, soft tissue, 0.9 x 0.6 x 0.3 cm. Submitted entirely in one cassette.

E: 12 L LYMPH NODES, BIOPSY:
--NO EVIDENCE OF MALIGNANCY IN ONE LYMPH NODE

E: Received in formalin, labeled with the patient's name, number and "12 L," is an irregular segment of black-brown, soft tissue, 0.9 x 0.6 x 0.3 cm. Submitted entirely in one cassette.

F: 8

F: Received fresh for intraoperative consultation, labeled with the patient's name, number and "8," is an irregular segment of yellow, lobulated fibrofatty tissue with areas of black-brown soft tissue, 3.0 x 0.7 x 0.4 cm. Submitted entirely in one cassette.

F: LYMPH NODES DESIGNATED 8, BIOPSY:
--NO EVIDENCE OF MALIGNANCY IN SEVEN LYMPH NODES.

F: Received fresh for intraoperative consultation, labeled with the patient's name, number and "8," is an irregular segment of yellow, lobulated fibrofatty tissue with areas of black-brown soft tissue, 3.0 x 0.7 x 0.4 cm. Submitted entirely in one cassette.

Identification of objects and information:

Current limitations with AP-LIS data

SURGICAL PATHOLOGY REPORT

Name: [REDACTED]
Accession #: **S05- [REDACTED] 75**
Date of Procedure: [REDACTED]/2005
Date Received: [REDACTED]/2005
Date Reported: [REDACTED]/2005
Submitting Physician: [REDACTED], MD
Med. Rec. #: [REDACTED]
Date of Visit: [REDACTED] 2005
ServLoc: 237/T03
Race: CAUCASIAN
DOB/Sex: [REDACTED] 19 (Age: [REDACTED] M)
SS#: [REDACTED]
Other External #: [REDACTED]
Copy To: [REDACTED]

FINAL DIAGNOSIS

A: LEFT UPPER LOBE, WEDGE RESECTION:
--MODERATELY DIFFERENTIATED ADENOCARCINOMA, SEE NOTE.
--EMPHYSEMATOUS CHANGES.

Note: The carcinoma measures 1.2 x 1.1 cm in largest dimension. It is subpleural, but does not penetrate into the pleura (elastic stain on sections A5 and A6). Angiolymphatic invasion is not identified. The margins of this wedge resection are uninvolved.

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--EMPHYSEMATOUS CHANGES.
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--NO EVIDENCE OF MALIGNANCY IN ONE PERIBRONCHIAL LYMPH NODE.

C: AP WINDOW #5 POSTERIOR LYMPH NODES, BIOPSY:
--NO EVIDENCE OF MALIGNANCY IN THREE LYMPH NODES.

D: ANTERIOR AP WINDOW, LYMPH NODES, BIOPSY:
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E: 12 L LYMPH NODES, BIOPSY:
--NO EVIDENCE OF MALIGNANCY IN ONE LYMPH NODE

F: LYMPH NODES DESIGNATED 8, BIOPSY:
--NO EVIDENCE OF MALIGNANCY IN SEVEN LYMPH NODES.

Electronically Signed Out By [REDACTED], MD/[REDACTED]

By the signature on this report, the individual or group listed as making the Final Interpretation/Diagnosis certifies that they have reviewed this case.

Intraoperative Consult Diagnosis

A. Microscopic: Lung involved by non-small cell carcinoma; favor adenocarcinoma. Drs. [REDACTED] and [REDACTED]

Clinical History:

Example Report #1

This is three database lines of text representing a single paragraph. Full hard returns create new "paragraphs" within a single database field.

"Free text" blob:
This is a single database field representing multiple paragraphs. The narrative text is mixed with the identifier.

Lung cancer

Specimens Submitted As:

- A: LEFT UPPER LOBE
 B: UPPER DIVISION LEFT UPPER APICAL POSTERIOR & ANTERIOR
 C: AP WINDOW # 5 POSTERIOR
 D: ANTERIOR AP WINDOW
 E: 12 L
 F: 8

What does "Left Upper lobe" or "12L" represent?

Links to database dictionary must be specific and accurately linked to narrative text. (i.e. Part type/specimen received).

Gross Description:

A: Received fresh for intraoperative consultation, labeled with the patient's name, number and "left upper lobe," is a pink-tan, wedge-shaped segment of soft tissue, 6.9 x 4.2 x 1.0 cm. The pleural surface is pink-tan and glistening with a stapled line measuring 12.0 cm. in length. The pleural surface shows a 0.5 cm. area of puckering. The pleural surface is inked black. The cut surface reveals a 1.2 x 1.1 cm., white-gray, irregular mass abutting the pleural surface and deep to the puckered area. The remainder of the cut surface is red-brown and congested. No other lesions are identified. Representative sections are submitted.

B: Received in formalin labeled with the patient's name, number and "upper division left upper lobe apical posterior and anterior segments," is a segment of red-gray soft tissue, 12.8 x 5.2 x 2.0 cm. The pleural surface is red-gray and lightly mottled with black streaks, smooth, and glistening. There are two stapled lines present, 10.0 and 8.0 cm. There is no palpable mass. The bronchial resection margin is identified, 0.5 cm. in length and 0.4 cm. in circumference. The outer surface is inked black. The cut surface reveals red-brown, crepitant and congested soft tissue. There are no lesions identified. Representative sections are submitted.

C: Received in formalin, labeled with the patient's name, number and "AP window," is an irregular segment of black-brown, soft tissue, 1.7 x 1.1 x 0.6 cm. Submitted entirely in one cassette.

D: Received in formalin, labeled with the patient's name, number and "anterior AP window," is an irregular segment of tan-black, soft tissue, 1.6 x 1.0 x 0.7 cm. Submitted entirely in one cassette.

E: Received in formalin, labeled with the patient's name, number and "12 L," is an irregular segment of black-brown, soft tissue, 0.9 x 0.6 x 0.3 cm. Submitted entirely in one cassette.

F: Received fresh for intraoperative consultation, labeled with the patient's name, number and "8," is an irregular segment of yellow, lobulated fibrofatty tissue with areas of black-brown soft tissue, 3.0 x 0.7 x 0.4 cm. Submitted entirely in one cassette.

Summary of Cassettes:

Specimen	Label	Site
A	1FS	mass
	2-4	entire stapled
	5,6	entire mass
	7,8	uninvolved lung tissue
B	1	vascular margin
	2	bronchial margin
	3-5	stapled line margin
	6-9	lung tissue, representative

Part and Block Identifier are part of the narrative text.

2005

Example Report #2

Specimen(s) Received

- A: SENTINEL NODE # 1 (48 COUNT)
- B: SENTINEL #2 (COUNT 15)
- C: SENTINEL #3 (COUNT 65)
- D: SENTINEL #4 (COUNT 10)
- E: LEFT BREAST RE-EXCISION
- F: EXTRA AXILLARY TISSUE

Colon “:” is used

Identifiers are hard to ‘find’ & not consistently implemented.
This makes it very hard to “address” information about “Specimen A”

Clinical History

Left breast cancer

Intraoperative Consult Diagnosis

A-D: Microscopic: No evidence of neoplasia. Drs. [REDACTED]

Dash “-” is used

Gross Description

A: Received fresh for intraoperative consultation, labelled with the patient's name, hospital number, and "sentinel lymph node, #1 (48)", is an irregular segment of yellow, lobulated, fibrofatty tissue, 2.5 x 2 x 1.5 cm. The cut surface reveals a tan-brown, smooth and rubbery lymph node. The entire specimen is submitted in one cassette.

B: Received fresh for intraoperative consultation, labelled with the patient's name, hospital number, and "sentinel lymph node, #2", is a segment of yellow, lobulated, fibrofatty tissue, 4 x 3.4 x 0.5 cm. The cut surface reveals two lymph nodes, 1 and 0.5 cm, respectively. The entire specimen is submitted in three cassettes.

Summary of Cassettes:

- B 1 one lymph node bisected
- 2 one lymph node bisected
- 3 fibrofatty tissue
- E 1,2 medial margin, perpendicular sections
- 3,4 cross section lateral to 1 and 2
- 5,6 cross section lateral to 3 and 4
- 7-10 cross section lateral to 5 and 6
- 11-14 cross section lateral to 7-10
- 15-18 cross section lateral to 11-14
- 19,20 lateral perpendicular sections

Only Letters used

2005

MD

Histology Data

Part A: SENTINEL NODE # 1 (48 COUNT)

Taken: 2005 12:49 Received: 2005 12:49 All Pieces Used? Y

Colon used

Final Pathologic Diagnosis

- A. SENTINEL NODE #1, EXCISION:
--ONE LYMPH NODE, NEGATIVE FOR TUMOR (0/1), SEE NOTE.
Note: Immunostain for cytokeratin (AE1/3) is negative.
- B. SENTINEL NODE #2, EXCISION:
--ONE LYMPH NODE, NEGATIVE FOR TUMOR (0/1), SEE NOTE.
Note: Immunostain for cytokeratin (AE1/3) is negative.
- C. SENTINEL NODE #3, EXCISION:
--ONE LYMPH NODE, NEGATIVE FOR TUMOR (0/1), SEE NOTE.
Note: Immunostain for cytokeratin (AE1/3) is negative.
- D. SENTINEL NODE #4, EXCISION:
--ONE LYMPH NODE, NEGATIVE FOR TUMOR (0/1), SEE NOTE.
Note: Immunostain for cytokeratin (AE1/3) is negative.
- E. LEFT BREAST, RE-EXCISION:
--RESIDUAL INFILTRATING DUCTAL CARCINOMA AND DUCTAL CARCINOMA IN SITU, SEE NOTE.
--CHANGES CONSISTENT WITH PRIOR EXCISIONAL CAVITY.
BREAST PARENCHYMA WITH LIPIDIC CHANGES

Period used

SURGICAL PATHOLOGY REPORT

Name: [REDACTED]
Accession #: S05- [REDACTED] 75
Date of Procedure: [REDACTED] 2005
Date Received: [REDACTED] 2005
Date Reported: [REDACTED] 2005
Med. Rec. #: [REDACTED]
Date of Visit: [REDACTED] 2005
Serv/Loc: 237703
Race: CAUCASIAN
DOB/Sec: [REDACTED] 19 [REDACTED] (Age: [REDACTED] M)
SS#: [REDACTED]
Other External #: [REDACTED]
Copy To: [REDACTED]
Submitting Physician: [REDACTED], MD

FINAL DIAGNOSIS

A: LEFT UPPER LOBE, WEDGE RESECTION:
--MODERATELY DIFFERENTIATED ADENOCARCINOMA, SEE NOTE.
--EMPHYSEMATOUS CHANGES.

Note: The carcinoma measures 1.2 x 1.1 cm in largest dimension. It is subpleural, but does not penetrate into the pleura (elastic stain on sections A5 and A6). Angiolymphatic invasion is not identified. The margins of this wedge resection are uninvolved.

B: UPPER DIVISION, LEFT UPPER APICAL POSTERIOR AND ANTERIOR SEGMENTS, RESECTION:
--EMPHYSEMATOUS CHANGES.
--RECENT HEMORRHAGE, CONSISTENT WITH RESECTION SITE (SPECIMEN A).
--BRONCHIAL MARGIN, NO EVIDENCE OF MALIGNANCY.
--VASCULAR MARGIN, NO EVIDENCE OF MALIGNANCY.
--NO EVIDENCE OF MALIGNANCY IN ONE PERIBRONCHIAL LYMPH NODE.

C: AP WINDOW #5 POSTERIOR LYMPH NODES, BIOPSY:
--NO EVIDENCE OF MALIGNANCY IN THREE LYMPH NODES.

D: ANTERIOR AP WINDOW, LYMPH NODES, BIOPSY:
--NO EVIDENCE OF MALIGNANCY IN TWO LYMPH NODES.

E: 12 L LYMPH NODES, BIOPSY:
--NO EVIDENCE OF MALIGNANCY IN ONE LYMPH NODE

F: LYMPH NODES DESIGNATED 8, BIOPSY:
--NO EVIDENCE OF MALIGNANCY IN SEVEN LYMPH NODES.

Electronically Signed Out By [REDACTED], MD

By the signature on this report, the individual or group listed as making the Final Interpretation/Diagnosis certifies that they have reviewed this case.

Intraoperative Consult Diagnosis

A. Macroscopic: Lung involved by non-small cell carcinoma, favor adenocarcinoma. Drs. [REDACTED] and [REDACTED]

Clinical History:

Lung cancer

Specimens Submitted As:

- A: LEFT UPPER LOBE
- B: UPPER DIVISION LEFT UPPER APICAL POSTERIOR & ANTERIOR SEGMENTS
- C: AP WINDOW # 5 POSTERIOR
- D: ANTERIOR AP WINDOW
- E: 12 L
- F: 8

Gross Description:

A: Received fresh for intraoperative consultation, labeled with the patient's name, number and "left upper lobe," is a pink-tan, wedge-shaped segment of soft tissue, 6.9 x 4.2 x 1.0 cm. The pleural surface is pink-tan and glistening with a stapled line measuring 12.0 cm. in length. The pleural surface shows a 0.5 cm. area of puckering. The pleural surface is inked black. The cut surface reveals a 1.2 x 1.1 cm., white-gray, irregular mass abutting the pleural surface and deep to the puckered area. The remainder of the cut surface is red-brown and congested. No other lesions are identified. Representative sections are submitted.

B: Received in formalin labeled with the patient's name, number and "upper diversion let upper lobe apical posterior and anterior segments," is a segment of red-gray soft tissue, 12.8 x 5.2 x 2.0 cm. The pleural surface is red-gray and lightly mottled with black streaks, smooth, and glistening. There are two stapled lines present, 10.0 and 8.0 cm. There is no palpable mass. The bronchial resection margin is identified, 0.5 cm. in length and 0.4 cm. in circumference. The outer surface is inked black. The cut surface reveals red-brown, crepitant and congested soft tissue. There are no lesions identified. Representative sections are submitted.

C: Received in formalin, labeled with the patient's name, number and "AP window," is an irregular segment of black-brown, soft tissue, 1.7 x 1.1 x 0.6 cm. Submitted entirely in one cassette.

D: Received in formalin, labeled with the patient's name, number and "anterior AP window," is an irregular segment of tan-black, soft tissue, 1.6 x 1.0 x 0.7 cm. Submitted entirely in one cassette.

E: Received in formalin, labeled with the patient's name, number and "12 L," is an irregular segment of black-brown, soft tissue, 0.9 x 0.6 x 0.3 cm. Submitted entirely in one cassette.

F: Received fresh for intraoperative consultation, labeled with the patient's name, number and "8," is an irregular segment of yellow, lobulated fibrofatty tissue with areas of black-brown soft tissue, 3.0 x 0.7 x 0.4 cm. Submitted entirely in one cassette.

Summary of Cassettes:

Specimen	Casser	Notes
A	1-FS	mass
	2-4	entire stapled
	5-6	entire mass
B	1-3	entire non-puckered tissue
	1	vascular margin
	2	bronchial margin
	3-5	stapled line margin
	6-9	lung tissue, representative

[REDACTED] 2005

- If the final report is not identifiable at each specimen level, it not useable!
- The author is structuring data within a field, BUT not machine friendly.
- Use parsing algorithms to pre-process data files directly from AP-LIS for Research use.

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A subset of discreet information from APLIS.....HOWEVER

UniversityHospitals HealthSystem	Department of Pathology 11100 Euclid Avenue Cleveland, Ohio 44106-5000 Phone: (216) 844-1817 Fax: (216) 844-1810
UniversityHospitals of Cleveland	
SURGICAL PATHOLOGY REPORT	
Name: [REDACTED]	Med. Rec. #: [REDACTED]
Accession #: S05-475	Date of Visit: 2005
Date of Procedure: [REDACTED]/2005	ServLoc: 237/T03
Date Received: [REDACTED]/2005	Race: CAUCASIAN
Date Reported: [REDACTED]/2005	DOB/Sex: [REDACTED] 719 (Age: [REDACTED] M)
Submitting Physician: [REDACTED], MD	SS#: [REDACTED]
	Other External #: [REDACTED]
	Case To: [REDACTED]

CWRU Paraffin Tissue Bank Annotation Engine



“Part Labels”

- Shows up on Final Report
- Free text value
- Represents what surgeon wrote on specimen container
- Vocabulary not controlled by Pathology

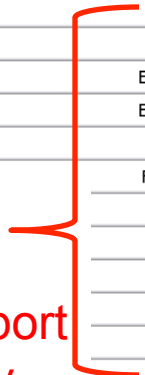
Specimens Submitted As:

A: LEFT UPPER LOBE
 B: UPPER DIVISION LEFT UPPER APICAL POSTERIOR & ANTERIOR SEGMENTS
 C: AP WINDOW # 5 POSTERIOR
 D: ANTERIOR AP WINDOW
 E: 12 L
 F: 8

“Part Types”

- Suppressed database value
- Does not show up on Final Report
- Discreet values and Vocabulary controlled by Pathology
- Avoid using generic terms to define data dictionary.

Orbit	11
Orbit, removal	2
Thoracic	
Lung	278
Mediastinum mass	3
Pleura	14
Thymus	14
Transbronchial	98
Transbronchial, Transplant	3
Unknown, See requisition label	
Big, other	3079
Big, tumor	238
Biopsy, mass	21
Biopsy, other	12372
Cyst	396
Foreign body	25
Gross only	2
Hardware	169
Implant	33
Prosthesis	3
Unknown	1
Vascular	
Aorta	42
Aortic aneurysm	20
ous malformation	3
Blood clot	31
Embolus	2
Graft	8
Plaque	111
Temporal artery	28
Thrombus	28
Varicose veins	38



--VASCULAR MARGIN, NO EVIDENCE OF MALIGNANCY.
 --NO EVIDENCE OF MALIGNANCY IN ONE PERIBRONCHIAL LYMPH NODE.

C: AP WINDOW #5 POSTERIOR LYMPH NODES, BIOPSY:
 --NO EVIDENCE OF MALIGNANCY IN THREE LYMPH NODES.

D: ANTERIOR AP WINDOW, LYMPH NODES, BIOPSY:
 --NO EVIDENCE OF MALIGNANCY IN TWO LYMPH NODES.

E: 12 L LYMPH NODES, BIOPSY:
 --NO EVIDENCE OF MALIGNANCY IN ONE LYMPH NODE

F: LYMPH NODES DESIGNATED 8, BIOPSY:
 --NO EVIDENCE OF MALIGNANCY IN SEVEN LYMPH NODES.

Electronically Signed Out By

/2005

Client: UHC

Billing Type: CHARGE, UHC

Billing Codes:

A: 10074 LEV 6, 10066 LEV 5, 10082 FS 1, 30301 SS CAT II, 30301 SS CAT II
 B: 10066 LEV 5
 C: 10031 LEV 4
 D: 10031 LEV 4
 E: 10031 LEV 4
 F: 10031 LEV 4

Coding information (poorly
 linked to narrative data)

Final ICD-9 Code(s):

A: 162.3

SNOMED Code(s):

A: M32800 (Emphysema, nos), M814032 (Adenocarcinoma, nos, moderately differentiated), P1100 (Excision, nos)
 B: M80103 (Carcinoma, nos), P1100 (Excision, nos), T00100 (Surgical margins), T29020 (Subpleural tissue)
 C: M09400 (Surgical margins free of tumor), M32800 (Emphysema, nos), M37000 (Hemorrhage, nos), P1100 (Excision, nos),
 T26000 (Bronchus, nos), T40000 (Blood vessel, nos)
 D: M09450 (No evidence of malignancy), P1140 (Biopsy, nos), T08000 (Lymph node, nos)
 E: M09450 (No evidence of malignancy), P1140 (Biopsy, nos), T08000 (Lymph node, nos)
 F: M09450 (No evidence of malignancy), P1140 (Biopsy, nos), T08000 (Lymph node, nos)
 G: P1140 (Biopsy, nos), T08000 (Lymph node, nos)

OTHER SPECIMENS

S9 Specimen Class: R Status: Signed Out Accessioned: /1995
 Signed out: 1995

Specimen(s) Received: A: RIGHT UPPER LOBE, B: 10 (R)-RIGHT TRACHEAL BRONCHIAL ANGLE LN, C: 4(R)-RIGHT LOWER PARATRACHEAL LN, D: 2(R)-RIGHT UPPER PARATRACHEAL LN, E: 8(R)-PARAESOPHAGEAL LN, F: 7(R)-SUBCARINAL LN

Final Diagnosis

A: RIGHT UPPER LOBE OF LUNG, LOBECTOMY: ADENOCARCINOMA, MODERATELY DIFFERENTIATED, SEE NOTE.
 MARKED ALVEOLAR HEMOSIDERIN-LADEN MACROPHAGES WITH VASCULAR AND SEPTAL CONGESTION.

Auto coding errors

C: AP WINDOW #5 POSTERIOR LYMPH NODES, BIOPSY:
--NO EVIDENCE OF MALIGNANCY IN THREE LYMPH NODES.

D: ANTERIOR AP WINDOW, LYMPH NODES, BIOPSY:
--NO EVIDENCE OF MALIGNANCY IN TWO LYMPH NODES.

E: 12 L LYMPH NODES, BIOPSY:
--NO EVIDENCE OF MALIGNANCY IN ONE LYMPH NODE

F: LYMPH NODES DESIGNATED 8, BIOPSY:
--NO EVIDENCE OF MALIGNANCY IN SEVEN LYMPH NODES.

A: LEFT UPPER LOBE, WEDGE RESECTION:
--MODERATELY DIFFERENTIATED ADENOCARCINOMA, SEE NOTE.
--EMPHYSEMATOUS CHANGES.

Hard return creates a new paragraph

Note: The carcinoma measures 1.2 x 1.1 cm in largest dimension. It is subpleural, but does not penetrate into the pleura (elastic stain on sections A5 and A6). Angiolymphatic invasion is not identified. The margins of this wedge resection are uninvolved.

B: UPPER DIVISION, LEFT UPPER APICAL POSTERIOR AND ANTERIOR SEGMENTS, RESECTION:
--EMPHYSEMATOUS CHANGES.
--RECENT HEMORRHAGE, CONSISTENT WITH RESECTION SITE (SPECIMEN A).
--BRONCHIAL MARGIN, NO EVIDENCE OF MALIGNANCY.
--VASCULAR MARGIN, NO EVIDENCE OF MALIGNANCY.
--NO EVIDENCE OF MALIGNANCY IN ONE PERIBRONCHIAL LYMPH NODE.

SNOMED Code(s):

...Causing misalignment of auto coding labels

A: M32800 (Emphysema, nos), M814032 (Adenocarcinoma, nos, moderately differentiated), P1100 (Excision, nos)
B: M80103 (Carcinoma, nos), P1100 (Excision, nos), T00100 (Surgical margins), T29020 (Subpleural tissue)
C: M09400 (Surgical margins free of tumor), M32800 (Emphysema, nos), M37000 (Hemorrhage, nos), P1100 (Excision, nos), T26000 (Bronchus, nos), T40000 (Blood vessel, nos)
D: M09450 (No evidence of malignancy), P1140 (Biopsy, nos), T08000 (Lymph node, nos)
E: M09450 (No evidence of malignancy), P1140 (Biopsy, nos), T08000 (Lymph node, nos)
F: M09450 (No evidence of malignancy), P1140 (Biopsy, nos), T08000 (Lymph node, nos)
G: P1140 (Biopsy, nos), T08000 (Lymph node, nos)

Auto coding errors

Example Report #3

Final Pathologic Diagnosis

RECTUM, BIOPSY:

–ACUTE PROCTITIS WITH MILD CRYPT ARCHITECTURAL DISTORTION, SEE NOTE.

Note: Differential diagnosis includes prolonged acute self-limited colitis versus early ulcerative proctitis. Granulomas and dysplasia are not identified.

[REDACTED]

Staff Consultant: [REDACTED]

Final ICD-9 Code(s):

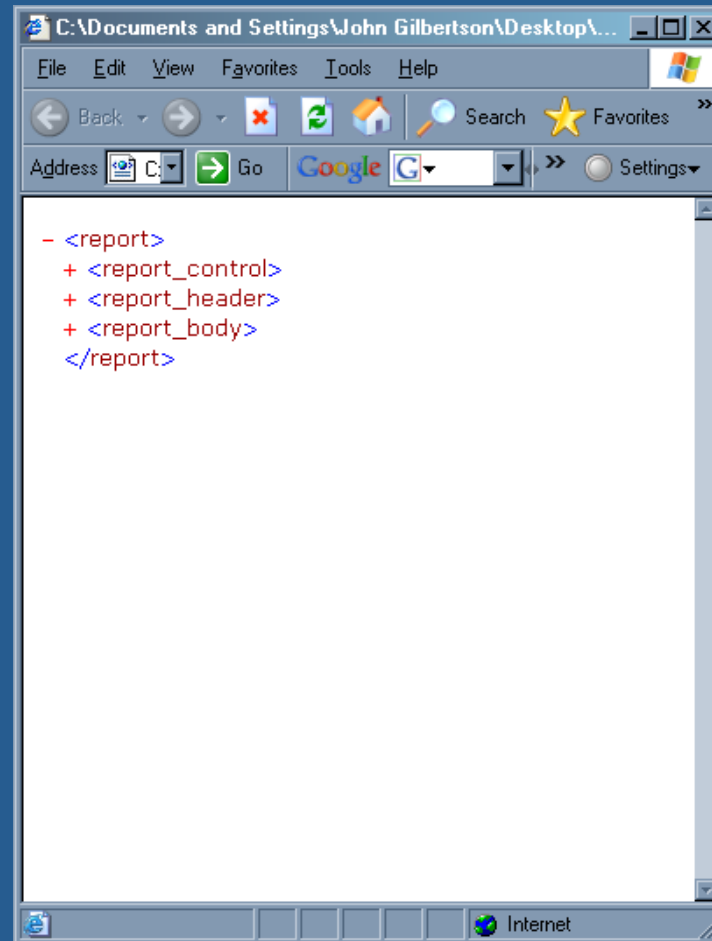
556.2

SNOMED Code(s):

A: M41000 (Inflammation, acute, nos), P1140 (Biopsy, nos), T68000 (Rectum, nos)

B: D6256 (Idiopathic ulcerative colitis), M41030 (Inflammation, acute ulcerative), M44000 (Inflammation, granulomatous, nos),
M74000 (Dysplasia, nos)

Creation of XML files



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UniversityHospitals HealthSystem		Department of Pathology 11100 Euclid Avenue Cleveland, Ohio 44106-5000 Phone: (216) 844-1817 Fax: (216) 844-1810	
UniversityHospitals of Cleveland			
SURGICAL PATHOLOGY REPORT			
Name: [REDACTED]	Med. Rec. #: [REDACTED]		
Accession #: S05- [REDACTED] 75	Date of Visit: [REDACTED] 2005		
Date of Procedure: [REDACTED] 2005	Serv.Loc.: 237/703		
Date Received: [REDACTED] 2005	Race: CAUCASIAN		
Date Reported: [REDACTED] 2005	DOB/Sex: [REDACTED] 19 (Age: [REDACTED]) M		
Submitting Physician: [REDACTED] MD	SS#: [REDACTED]		
	Other External #: [REDACTED]		
	Copy To: [REDACTED]		
FINAL DIAGNOSIS			

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**University Hospitals
Health System**

University Hospitals
of Cleveland

Department of Pathology
11100 Euclid Avenue
Cleveland, Ohio 44106-5000
Phone: (216) 844-1817 Fax: (216) 844-1810

SURGICAL PATHOLOGY REPORT

Name: [REDACTED]
 Accession #: S05- [REDACTED] 75
 Date of Procedure: [REDACTED] 2005
 Date Received: [REDACTED] 2005
 Date Reported: [REDACTED] 2005
 Med. Rec. #: [REDACTED]
 Date of Visit: [REDACTED] 2005
 Ser/Loc: 237703
 Race: CAUCASIAN
 DOB/Sex: [REDACTED] 18 (Age) M
 SS#: [REDACTED]
 Other External #: [REDACTED]
 Copy To: [REDACTED]
 Submitting Physician: [REDACTED] MD

A: LEFT UPPER LOBE, WEDGE RESECTION:
 --MODERATELY DIFFERENTIATED ADENOCARCINOMA, SEE NOTE.
 --EMPHYSEMATOUS CHANGES.
 Note: The carcinoma measures 1.2 x 1.1 cm in largest dimension. It is subpleural, but does not penetrate into the pleura (elastic stain on sections A5 and A6). Angiolymphatic invasion is not identified. The margins of this wedge resection are uninvolved.

B: UPPER DIVISION, LEFT UPPER APICAL POSTERIOR AND ANTERIOR SEGMENTS, RESECTION:
 --EMPHYSEMATOUS CHANGES.
 --RECENT HEMORRHAGE, CONSISTENT WITH RESECTION SITE (SPECIMEN A).
 --BRONCHIAL MARGIN, NO EVIDENCE OF MALIGNANCY.
 --VASCULAR MARGIN, NO EVIDENCE OF MALIGNANCY.
 --NO EVIDENCE OF MALIGNANCY IN ONE PERIBRONCHIAL LYMPH NODE.

C: AP WINDOW #5 POSTERIOR LYMPH NODES, BIOPSY:
 --NO EVIDENCE OF MALIGNANCY IN THREE LYMPH NODES.

D: ANTERIOR AP WINDOW, LYMPH NODES, BIOPSY:
 --NO EVIDENCE OF MALIGNANCY IN TWO LYMPH NODES.

E: 12 L LYMPH NODES, BIOPSY:
 --NO EVIDENCE OF MALIGNANCY IN ONE LYMPH NODE.

F: LYMPH NODES DESIGNATED 8, BIOPSY:
 --NO EVIDENCE OF MALIGNANCY IN SEVEN LYMPH NODES.

Electronically Signed Out By [REDACTED] MD

Intraoperative Consult Diagnosis
 A. Microscopic: Lung involved by non-small cell carcinoma, favor adenocarcinoma. Drs. [REDACTED] and [REDACTED]

Clinical History:

SURGICAL PATHOLOGY REPORT

S05- [REDACTED]

Specimens Submitted As:

- A: LEFT UPPER LOBE
- B: UPPER DIVISION LEFT UPPER APICAL POSTERIOR & ANTERIOR SEGMENTS
- C: AP WINDOW # 5 POSTERIOR
- D: ANTERIOR AP WINDOW
- E: 12 L
- F: 8

Gross Description:

- A: Received fresh for intraoperative consultation, labeled with the patient's name, number and "left upper lobe," is a pink-tan, wedge-shaped segment of soft tissue, 6.9 x 4.2 x 1.0 cm. The pleural surface is pink-tan and glistening with a stapled line measuring 12.0 cm. in length. The pleural surface shows a 0.5 cm. area of puckering. The pleural surface is inked black. The cut surface reveals a 1.2 x 1.1 cm., white-gray, irregular mass abutting the pleural surface and deep to the puckered area. The remainder of the cut surface is red-brown and congested. No other lesions are identified. Representative sections are submitted.
- B: Received in formalin labeled with the patient's name, number and "upper division left upper lobe apical posterior and anterior segments," is a segment of red-gray soft tissue, 12.8 x 5.2 x 2.0 cm. The pleural surface is red-gray and lightly mottled with black streaks, smooth, and glistening. There are two stapled lines present, 10.0 and 6.0 cm. There is no palpable mass. The bronchial resection margin is identified, 0.5 cm. in length and 0.4 cm. in circumference. The outer surface is inked black. The cut surface reveals red-brown, crepitant and congested soft tissue. There are no lesions identified. Representative sections are submitted.
- C: Received in formalin, labeled with the patient's name, number and "AP window," is an irregular segment of black-brown, soft tissue, 1.7 x 1.1 x 0.6 cm. Submitted entirely in one cassette.
- D: Received in formalin, labeled with the patient's name, number and "anterior AP window," is an irregular segment of tan-black, soft tissue, 1.6 x 1.0 x 0.7 cm. Submitted entirely in one cassette.
- E: Received in formalin, labeled with the patient's name, number and "12 L," is an irregular segment of black-brown, soft tissue, 0.9 x 0.6 x 0.3 cm. Submitted entirely in one cassette.
- F: Received fresh for intraoperative consultation, labeled with the patient's name, number and "8," is an irregular segment of yellow, lobulated fibrotic tissue with areas of black-brown soft tissue, 3.0 x 0.7 x 0.4 cm. Submitted entirely in one cassette.

Summary of Cassettes:

Specimen	Label	Site
A	1-F5	mass
	2-4	entire stapled
	5-6	entire mass
B	7-8	uninvolved lung tissue
	1	vascular margin
	2	bronchial margin
	3-5	stapled line margin
6-9	lung tissue, representative	


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Original String

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upper lobe," is a pink-tan, wedge-shaped segment of soft tissue, 6.9 x 4.2 x 1.0 cm. The pleural surface is pink-
tan and glistening with a stapled line measuring 12.0 cm. in length. The pleural surface shows a 0.5 cm. area of
puckering. The pleural surface is inked black. The cut surface reveals a 1.2 x 1.1 cm., white-gray, irregular mass
abutting the pleural surface and deep to the puckered area. The remainder of the cut surface is red-brown and
congested. No other lesions are identified. Representative sections are submitted. XXX</parse_string>

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patient's name, number and "left upper lobe," is a pink-tan, wedge-shaped segment of soft tissue, 6.9 x 4.2 x
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pleural surface shows a 0.5 cm. area of puckering. The pleural surface is inked black. The cut surface reveals a
1.2 x 1.1 cm., white-gray, irregular mass abutting the pleural surface and deep to the puckered area. The
remainder of the cut surface is red-brown and congested. No other lesions are identified. Representative
sections are submitted. XXX" />

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Parse String

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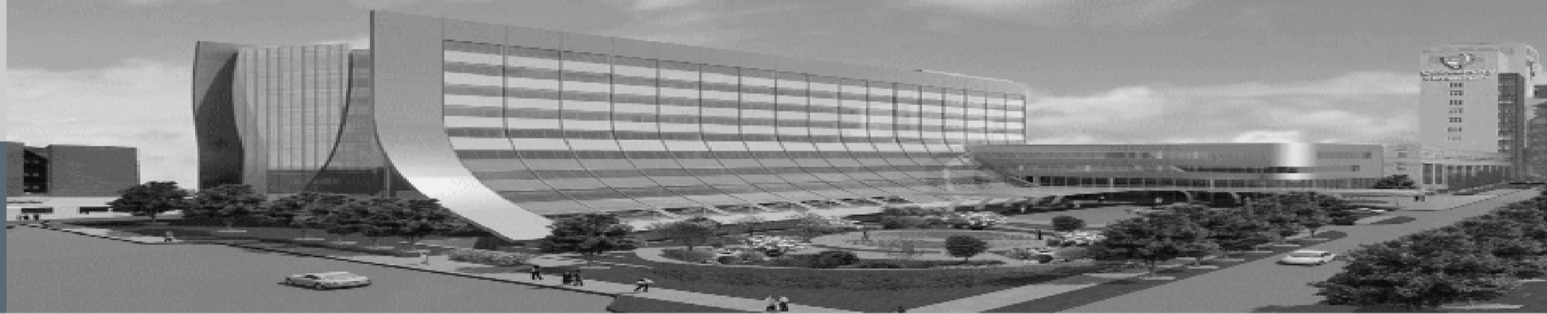
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Welcome to the CWRU Paraffin Tissue Bank Annotation Engine (v 0.9)

Developed by the Informatics Team in the CWRU Department of Pathology, the Paraffin Tissue Bank Annotation Engine provides the ability to query for archived clinical tissues by the Scientific Research Community Case Western Reserve University, University Hospitals - Case Medical Center, and the Case Comprehensive Cancer Center.

For further information, please contact a member of the CWRU Pathology Informatics Team:
 Bob Lanese, MS 216.844.8679 bob.lanese@case.edu
 Ashokkumar Patel, MD 216.368.5106 ashok.patel@case.edu
 Rajnish Gupta, MS

Sign-In Name:

Password:

Current Statistics	
348,407	Unique Patients
1,026,218	Surgical Pathology Accessions (Cases)
656,941	Specimens (Parts)
876,187	Blocks
1,058,440	Slides

NOTE: Currently, only routine cases for from Year 1995 - 2007 from UH-CMC are available for searching.

Specimens by Speciality (Aggregated Organ Types)	
Bone/Soft Tissue	11808
Breast	14452
Cardiac	1961
Dermatology	3335
Electron Microscopy	101
Gastrointestinal	66675
Gastrointestinal/Gynecology	771
Genitourinary	10599
Gynecology	68418
Head and Neck	5826
Hematopathology	14093
Lymph Node	12195
Medical Kidney	1607
Medical Liver	3215
Neuropathology	4171

Information derived from our APLIS

For 1995-2011 "routine" accessions and "GYN-cytology".

> 1.5 million reports processed

1 Facility – UH-CMC

Grouped by Sub-specialty pathology groups/ Organ Systems.

Identification of objects and information allows:

**Reorganization of AP LIS data for
“Researcher friendly” views**

**University Hospitals
HealthSystem**

University Hospitals
of Cleveland

Department of Pathology
11100 Euclid Ave
Cleveland, Ohio 44106
Phone: (216) 844-2200

SURGICAL PATHOLOGY REPORT

Name: [REDACTED]
Accession #: S05- [REDACTED] 75
Date of Procedure: 1/2005
Date Received: 1/2005
Date Reported: 1/2005

Med. Rec. #: [REDACTED]
Date of Visit: [REDACTED]
Serv/Loc: [REDACTED]
Race: [REDACTED]
DOB/Sec: [REDACTED]
SS#: [REDACTED]
Other External Copy To: [REDACTED]

Submitting Physician: [REDACTED], MD

FINAL DIAGNOSIS

A: LEFT UPPER LOBE, WEDGE RESECTION:
--MODERATELY DIFFERENTIATED ADENOCARCINOMA, SEE NOTE.
--EMPHYSEMATOUS CHANGES.

Note: The carcinoma measures 1.2 x 1.1 cm in largest dimension. It is subpleural, but pleura (elastic stain on sections A5 and A6). Angiolymphatic invasion is not identified. resection are uninvolved.

B: UPPER DIVISION, LEFT UPPER APICAL POSTERIOR AND ANTERIOR SEGMENTS, RESECTION:
--EMPHYSEMATOUS CHANGES.
--RECENT HEMORRHAGE, CONSISTENT WITH RESECTION SITE (SPECIMEN A).
--BRONCHIAL MARGIN, NO EVIDENCE OF MALIGNANCY.
--VASCULAR MARGIN, NO EVIDENCE OF MALIGNANCY.
--NO EVIDENCE OF MALIGNANCY IN ONE PERIBRONCHIAL LYMPH NODE.

C: AP WINDOW #5 POSTERIOR LYMPH NODES, BIOPSY:
--NO EVIDENCE OF MALIGNANCY IN THREE LYMPH NODES.

D: ANTERIOR AP WINDOW, LYMPH NODES, BIOPSY:
--NO EVIDENCE OF MALIGNANCY IN TWO LYMPH NODES.

E: 12 L LYMPH NODES, BIOPSY:
--NO EVIDENCE OF MALIGNANCY IN ONE LYMPH NODE

F: LYMPH NODES DESIGNATED 8, BIOPSY:
--NO EVIDENCE OF MALIGNANCY IN SEVEN LYMPH NODES.

Original Report

Electronically Signed Out By [REDACTED], MD

By the signature on this report, the individual or group listed as making the Final Interpretation/Diagnosis certifies that they have reviewed this case.

Intraoperative Consult Diagnosis

A. Microscopic: Lung involved by non-small cell carcinoma; favor adenocarcinoma. Drs. [REDACTED] and [REDACTED]

Clinical History:

[REDACTED]

Patient Information

DeID:	13663
Race:	CAUCASIAN
Gender:	M
Year of Birth:	****

Accession Information

Accession No.:	20056355
Specimen No.:	***.*****

Specimen Information

Part Designator	Description	All Pieces Used	Gross Description	Final Description
A	LUNG, LOBE/TOTAL	N	Received fresh for intraoperative consultation, labeled with the patient's name, number and left upper lobe, is a pink-tan, wedge-shaped segment of soft tissue, 6.9 x 4.2 x 1.0 cm. The pleural surface is pink-tan and glistening with a stapled line measuring 12.0 cm. in length. The pleural surface shows a 0.5 cm. area of puckering. The pleural surface is inked black. The cut surface reveals a 1.2 x 1.1 cm., white-gray, irregular mass abutting the pleural surface and deep to the puckered area. The remainder of the cut surface is red-brown and congested. No other lesions are identified. Representative sections are submitted. ELS	LEFT UPPER LOBE, WEDGE RESECTION: --MODERATELY DIFFERENTIATED ADENOCARCINOMA, SEE NOTE. --EMPHYSEMATOUS CHANGES. The carcinoma measures 1.2 x 1.1 cm in largest dimension. It is subpleural, but pleura (elastic stain on sections A5 and A6). Angiolymphatic invasion is not identified. The margins of resection are uninvolved.
B	LUNG, WEDGE	N	Received in formalin labeled with the patient's name, number and upper diversion left upper lobe apical posterior and anterior segments, is a segment of red-gray soft tissue, 12.8 x 5.2 x 2.0 cm. The pleural surface is red-gray and lightly mottled with black streaks, smooth, and glistening. There are two stapled lines present, 10.0 and 8.0 cm. There is no palpable mass. The bronchial resection margin is identified, 0.5 cm. in length and 0.4 cm. in circumference. The outer surface is inked black. The cut surface reveals red-brown, crepitant and congested soft tissue. There are no lesions identified. Representative sections are submitted. ELS	UPPER DIVISION, LEFT UPPER APICAL POSTERIOR AND ANTERIOR SEGMENTS, RESECTION: --EMPHYSEMATOUS CHANGES. --RECENT HEMORRHAGE, CONSISTENT WITH RESECTION SITE (SPECIMEN A). --BRONCHIAL MARGIN, NO EVIDENCE OF MALIGNANCY. --VASCULAR MARGIN, NO EVIDENCE OF MALIGNANCY. --NO EVIDENCE OF MALIGNANCY IN ONE PERIBRONCHIAL LYMPH NODE
C	LYMPH NODE, SINGLE WITHOUT PROTOCOL	Y	Received in formalin, labeled with the patient's name, number and AP window, is an irregular segment of black-brown, soft tissue, 1.7 x 1.1 x 0.6 cm. Submitted entirely in one cassette. ELS	AP WINDOW #5 POSTERIOR LYMPH NODES, BIOPSY: --NO EVIDENCE OF MALIGNANCY IN THREE LYMPH NODES
D	LYMPH NODE, SINGLE WITHOUT PROTOCOL	Y	Received in formalin, labeled with the patient's name, number and anterior AP window, is an irregular segment of tan-black, soft tissue, 1.6 x 1.0 x 0.7 cm. Submitted entirely in one cassette. ELS	ANTERIOR AP WINDOW, LYMPH NODES, BIOPSY: --NO EVIDENCE OF MALIGNANCY IN TWO LYMPH NODES
E	LYMPH NODE, SINGLE WITHOUT PROTOCOL	Y	Received in formalin, labeled with the patient's name, number and 12 L, is an irregular segment of black-brown, soft tissue, 0.9 x 0.6 x 0.3 cm. Submitted entirely in one cassette. ELS	12 L LYMPH NODES, BIOPSY: --NO EVIDENCE OF MALIGNANCY IN ONE LYMPH NODE
F	LYMPH NODE, SINGLE WITHOUT PROTOCOL	Y		

Done

Structured Report

CWRU Paraffin Tissue Bank Annotation Engine



CASE COMPREHENSIVE
CANCER CENTER



Search Parameters

Accession #:

Query Tool

OR

Gender:

Race:

Age Range:

Organ:

Procedure:

Specimen Type:

Organ System:

CoPath Part Type:

Final Description: (lowercase string)

Filtered by:

Accession No.:	
Gender:	M
Race:	All
Age Range:	All
Organ:	Lung
Procedure:	All
Part Type:	All
Organ System:	Thoracic
CoPath Part Type:	LUNG, LOBE/TOTAL
Final Desc.:	left upper lobe

Number of records returned is:

4

Detail Listing

Item	Detail	Patient DeID	Race	Gender	Accession Nbr
1		5275	CAUCASIAN	M	20052528
2		11169	CAUCASIAN	M	200513554
3		12041	BLACK	M	20055591
4		13663	CAUCASIAN	M	20056355

Query Results



Specimen level annotation

Patient Information

DeID:	13663
Race:	CAUCASIAN
Gender:	M
Year of Birth:	****

Accession Information

Accession No.:	20056355
Specimen No.:	***.*****

Specimen Information

Part Designator	Description	All Pieces Used	Gross Description	Final Description
A	LUNG, LOBE/TOTAL	N	Received fresh for intraoperative consultation, labeled with the patient's name, number and left upper lobe, is a pink-tan, wedge-shaped segment of soft tissue, 6.9 x 4.2 x 1.0 cm. The pleural surface is pink-tan and glistening with a stapled line measuring 12.0 cm. in length. The pleural surface shows a 0.5 cm. area of puckering. The pleural surface is inked black. The cut surface reveals a 1.2 x 1.1 cm., white-gray, irregular mass abutting the pleural surface and deep to the puckered area. The remainder of the cut surface is red-brown and congested. No other lesions are identified. Representative sections are submitted. ELS	LEFT UPPER LOBE, WEDGE RESECTION: --MODERATELY DIFFERENTIATED ADENOCARCINOMA, SEE NOTE. --EMPHYSEMATOUS CHANGES. Note: The carcinoma measures 1.2 x 1.1 cm in largest dimension. It is subpleural, but does not penetrate into the pleura (elastic stain on sections A5 and A6). Angiolymphatic invasion is not identified. The margins of this wedge resection are uninvolved
B	LUNG, WEDGE	N	Received in formalin labeled with the patient's name, number and upper diversion left upper lobe apical posterior and anterior segments, is a segment of red-gray soft tissue, 12.8 x 5.2 x 2.0 cm. The pleural surface is red-gray and lightly mottled with black streaks, smooth, and glistening. There are two stapled lines present, 10.0 and 8.0 cm. There is no palpable mass. The bronchial resection margin is identified, 0.5 cm. in length and 0.4 cm. in circumference. The outer surface is inked black. The cut surface reveals red-brown, crepitant and congested soft tissue. There are no lesions identified. Representative sections are submitted. ELS	UPPER DIVISION, LEFT UPPER APICAL POSTERIOR AND ANTERIOR SEGMENTS, RESECTION: --EMPHYSEMATOUS CHANGES. --RECENT HEMORRHAGE, CONSISTENT WITH RESECTION SITE (SPECIMEN A). -- BRONCHIAL MARGIN, NO EVIDENCE OF MALIGNANCY. --VASCULAR MARGIN, NO EVIDENCE OF MALIGNANCY. --NO EVIDENCE OF MALIGNANCY IN ONE PERIBRONCHIAL LYMPH NODE
C	LYMPH NODE, SINGLE WITHOUT PROTOCOL	Y	Received in formalin, labeled with the patient's name, number and AP window, is an irregular segment of black-brown, soft tissue, 1.7 x 1.1 x 0.6 cm. Submitted entirely in one cassette. ELS	AP WINDOW #5 POSTERIOR LYMPH NODES, BIOPSY: --NO EVIDENCE OF MALIGNANCY IN THREE LYMPH NODES
D	LYMPH NODE, SINGLE WITHOUT PROTOCOL	Y	Received in formalin, labeled with the patient's name, number and anterior AP window, is an irregular segment of tan-black, soft tissue, 1.6 x 1.0 x 0.7 cm. Submitted entirely in one cassette. ELS	ANTERIOR AP WINDOW, LYMPH NODES, BIOPSY: --NO EVIDENCE OF MALIGNANCY IN TWO LYMPH NODES
E	LYMPH NODE, SINGLE WITHOUT PROTOCOL	Y	Received in formalin, labeled with the patient's name, number and 12 L, is an irregular segment of black-brown, soft tissue, 0.9 x 0.6 x 0.3 cm. Submitted entirely in one cassette. ELS	12 L LYMPH NODES, BIOPSY: --NO EVIDENCE OF MALIGNANCY IN ONE LYMPH NODE
F	LYMPH NODE, SINGLE WITHOUT PROTOCOL	Y		

Block description for each block

F	LYMPH NODE, SINGLE WITHOUT PROTOCOL	Y
---	--	---

Block Information

Specimen Part Designator	Block Design Label	No of Pieces	Block Description
A	1	1	FS mass
A	2	1	entire stapled
A	3	1	entire stapled
A	4	1	entire stapled
A	5	1	entire mass
A	6	1	entire mass
A	7	1	uninvolved lung tissue
A	8	1	uninvolved lung tissue
B	1	1	vascular margin
B	2	1	bronchial margin
B	3	1	stapled line margin
B	4	1	stapled line margin
B	5	1	stapled line margin
B	6	1	
B	7	1	
B	8	1	
B	9	1	
C	1	1	
D	1	1	
E	1	1	
F	1	1	

Slide Information

Spec. Part Desig. - Block Design Label	Slide Label	DICOM ID
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A-1	Frozen Section	20056355.A.1.2

Slide Staining information

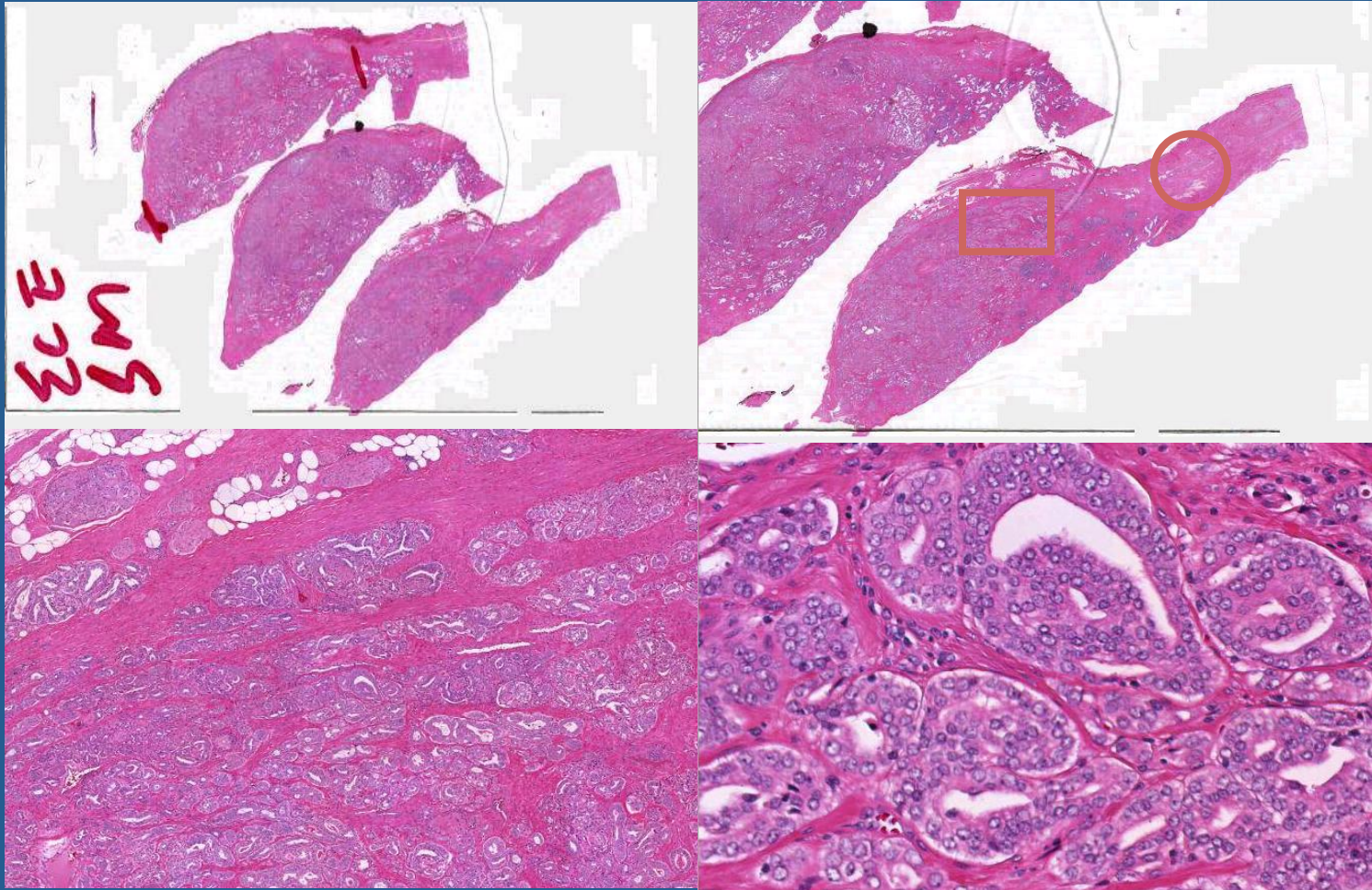
Spec. Part Desig. - Block Design Label	Slide Label	DICOM ID
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A-1	Frozen Section	20056355.A.1.2
A-2	H&E (1)	20056355.A.2.3
A-3	H&E (1)	20056355.A.3.4
A-4	H&E (1)	20056355.A.4.5
A-5	H&E (1)	20056355.A.5.6
A-5	Elastic	20056355.A.5.23
A-6	H&E (1)	20056355.A.6.7
A-6	Elastic	20056355.A.6.24
A-7	H&E (1)	20056355.A.7.8
A-8	H&E (1)	20056355.A.8.9
B-1	H&E (1)	20056355.B.1.10
B-2	H&E (1)	20056355.B.2.11
B-3	H&E (1)	20056355.B.3.12
B-4	H&E (1)	20056355.B.4.13
B-5	H&E (1)	20056355.B.5.14
B-6	H&E (1)	20056355.B.6.15
B-7	H&E (1)	20056355.B.7.16
B-8	H&E (1)	20056355.B.8.17
B-9	H&E (1)	20056355.B.9.18
C-1	H&E (1)	20056355.C.1.19
D-1	H&E (1)	20056355.D.1.20
E-1	H&E (1)	20056355.E.1.21
F-1	H&E (1)	20056355.F.1.22

Other Accessions/Specimens Information

Accession No.	Part Designator	Description	All Pieces Used	Gross Desc.	Final Desc.
---------------	-----------------	-------------	-----------------	-------------	-------------

Done Internet

Whole slide images



Research Scenario # 3

Prostate Gleason Grade (intermediate)

Research Scenario

I want to study biomarker X, which helps predict treatment options for “Aggressive” prostate cancer.

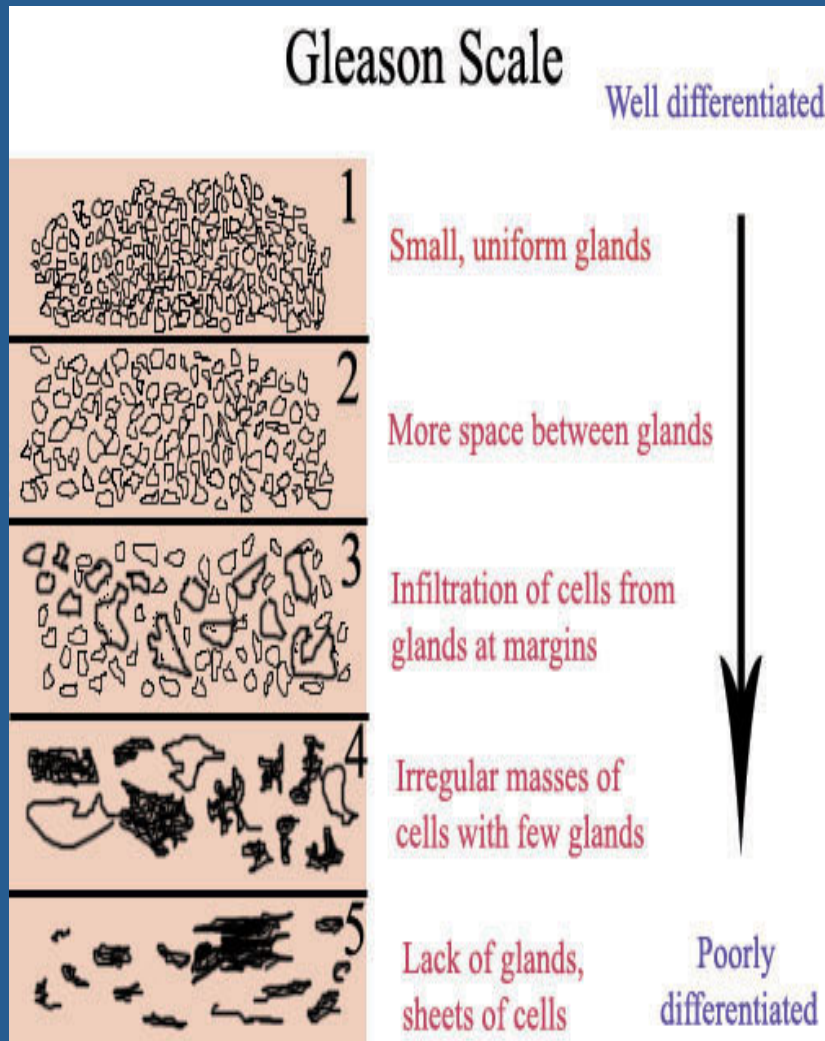
Can we use this biomarker X to help patients that are diagnosed with “intermediate” prostate cancer?

Will compare “intermediate” vs “high” grade prostate cancer tissues.

I need paraffin, prostatectomy tissue from African American males.
Gleason Sum Score (7) and (8, 9 or 10)
Peri-neural Invasion Positive

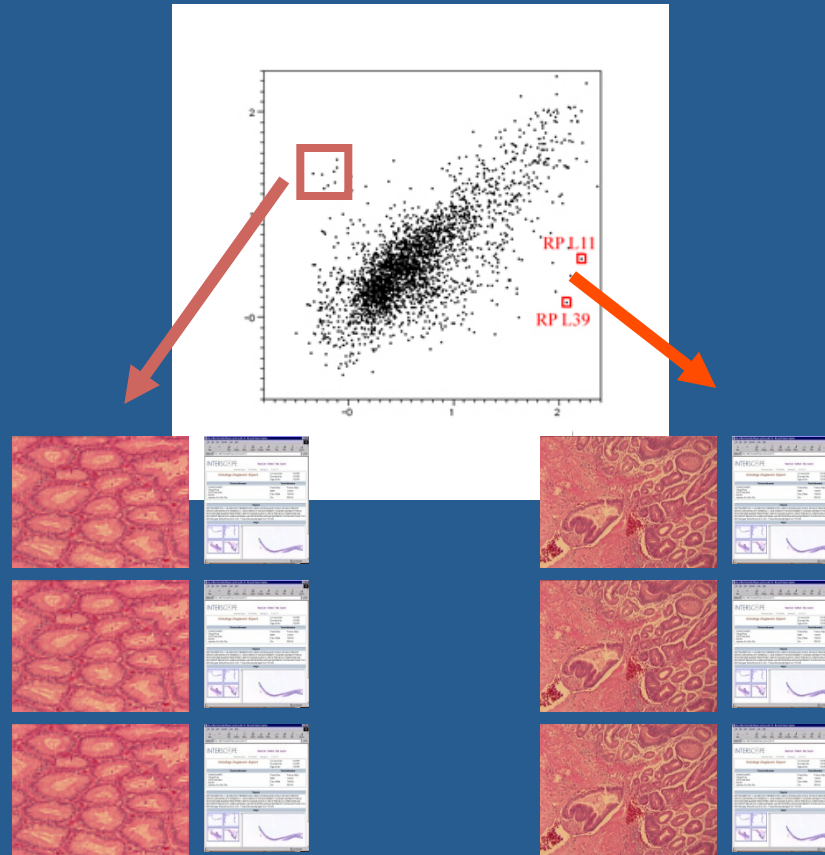
Can your local biobank help me?

Research Scenario: Gleason Grade (Prostate)



- **Gleason score of 4 or less** = Low-grade (well differentiated): This type of slow-growing cancer has an appearance most like normal prostate cells and is the least dangerous.
- **Gleason score between 4 and 7** = Intermediate grade (moderately differentiated): This type is somewhere between the low- and high-grade cancers and the most common of the three. Depending on PSA level and tumor volume, it can act like a high- or low-grade cancer.
- **Gleason score between 8 and 10** = High-grade (poorly differentiated): This type of cancer has an appearance least like normal prostate cells. It is the most deadly since it is very aggressive and grows very fast -- even into surrounding areas such as lymph nodes and bones. These cancer cells also tend to be large, hard to treat, and reappear more frequently.

Research Scenario: Data Analysis



Not all Gleason 7 are the same!!!!

- Gleason $5+2 = 7$
- Gleason $4+3 = 7$
- Gleason $3+4 = 7$
- Gleason $2+5 = 7$

Research Scenario # 4

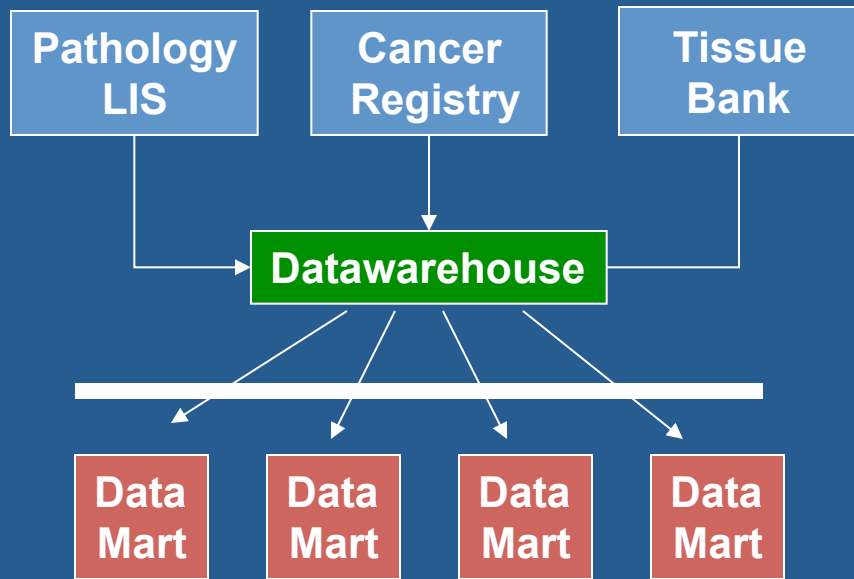
Follow up/Outcomes data

Research Scenario

I need paraffin, prostatectomy tissue from African American males.
Gleason Sum Score (7) and (8, 9 or 10)
Peri-neural Invasion Positive

Can you also provide follow up data for at least one year?

Data Integration



**Disease Specific Registries
(Researchers)**

- Cancer Registry
- Clinical Trails
- Biorepository inventory system
- Family Medicine registry
- Epidemiology/Genetics/Hereditary research databases
- Links to whole slide images/TMAs (in process)

Patient Identification

Case Identification

Gender Code M F U
 Age Range for searching 0-20 21-30 31-40 41-50 51-60 61-70 71-80 >80 UNKNOWN

Related Data Sets Available ?

BSM Data Yes No
 Tissue Bank Yes No

Research Consent Elements

Tissue Consent Status add later VALID NOT VALID UNKNOWN
 Data Consent Status add later VALID NOT VALID UNKNOWN

Demographics

Base Demographics

Race ORIENTAL INDIAN (American) BLACK Unknown CAUCASIAN Hispanic Test Race

Tissue Accession Data

Date and Procedure Elements

Part Requisition Label
 All Pieces Used Y N
 Final Diagnosis
 Gross Description
 Organ System
 Organ Name
 Procedure Name
 Part Type Name
 Original Part Type

200810192352

Search Result 1-20 of 9520 [Display All](#)

	▲▼ Patient Case Number	▲▼ Patient Case Number
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2	CWR-P000000088	P000000088
3	CWR-P000000262	P000000262
4	CWR-P000000351	P000000351
5	CWR-P000000416	P000000416
6	CWR-P000000419	P000000419
7	CWR-P000000459	P000000459
8	CWR-P000000463	P000000463
9	CWR-P000000466	P000000466
10	CWR-P000000497	P000000497
11	CWR-P000000515	P000000515
12	CWR-P000000519	P000000519
13	CWR-P000000528	P000000528
14	CWR-P000000534	P000000534
15	CWR-P000000667	P000000667
16	CWR-P000000670	P000000670
17	CWR-P000000802	P000000802
18	CWR-P000000804	P000000804
19	CWR-P000000823	P000000823
20	CWR-P000000829	P000000829

200810192332 Search Result 1-20 of 33619 Display All

	Patient Case Number	Date Of Birth	Gender Code	Age Range	Tissue Consent Status add later	Data Consent Status add later	Race
1	CWR-P00000008		M	>80	VALID	VALID	ORIENTAL
2	CWR-P000000088		M	>80	VALID	VALID	ORIENTAL
3	CWR-P000000088		M	>80	VALID	VALID	ORIENTAL
4	CWR-P000000262		F	>80	VALID	VALID	ORIENTAL
5	CWR-P000000262		F	>80	VALID	VALID	ORIENTAL
6	CWR-P000000262		F	>80	VALID	VALID	ORIENTAL
7	CWR-P000000262		F	>80	VALID	VALID	ORIENTAL
8	CWR-P000000262		F	>80	VALID	VALID	ORIENTAL
9	CWR-P000000262		F	>80	VALID	VALID	ORIENTAL
10	CWR-P000000351		M	>80	VALID	VALID	BLACK
11	CWR-P000000416		F	>80	VALID	VALID	BLACK
12	CWR-P000000416		F	>80	VALID	VALID	BLACK
13	CWR-P000000416		F	>80	VALID	VALID	BLACK
14	CWR-P000000416		F	>80	VALID	VALID	BLACK
15	CWR-P000000416		F	>80	VALID	VALID	BLACK
16	CWR-P000000416		F	>80	VALID	VALID	BLACK
17	CWR-P000000416		F	>80	VALID	VALID	BLACK
18	CWR-P000000416		F	>80	VALID	VALID	BLACK
19	CWR-P000000416		F	>80	VALID	VALID	BLACK
20	CWR-P000000419		F	>80	VALID	VALID	CAUCASIAN

Patient Case Number	De-identified Accession Part ID	Part Requisition Label	All Pieces Used	Final Diagnosis	Gross Description	Organ System	Organ Name	Procedure Name	Part Type Name	Original Part Type	
1	CWR-P000000008	1900197812.A	DESCENDING COLON POLYP	Y	DESCENDING COLON, BIOPSY: -- TUBULAR ADENOMA.	Received in formalin, labeled with the patient's name, number, and A. descending colon polyp, is one irregular, tan-brown, soft tissue fragment measuring 0.7 x 0.5 x 0.3 cm. The soft tissue fragment is inked in black on the cut surface and is bisected. Submitted entirely in one cassette <***initials***>	GASTROINTESTINAL	COLON	BIOPSY	POLYP, BX	Polyp
2	CWR-P000000008	1900197812.B	SIGMOID COLON POLYP	Y	SIGMOID COLON, BIOPSIES: -- FRAGMENTS OF TUBULAR ADENOMA	Received in formalin, labeled with the patient's name, number, and B. sigmoid colon polyp are two irregular, brown, soft tissue fragments measuring 0.3 x 0.2 x 0.1 cm, and 0.7 x 0.5 x 0.4 cm. The largest soft tissue fragment is inked in black on cut surface and is bisected. Submitted entirely in two cassettes <***initials***>	GASTROINTESTINAL	COLON	BIOPSY	POLYP, BX	Polyp
3	CWR-P000000008	1900665400.C	SIGMOID SNARE POLYP	Y	SIGMOID COLON, BIOPSY: -- TUBULAR ADENOMA.	Received in formalin, labeled with the patient's name, number, and C., and is one irregular white to tan to light brown soft tissue fragment measuring 0.5 x 0.3 x 0.2 cm. Submitted in toto in one cassette <***initials***>	GASTROINTESTINAL	COLON	BIOPSY	POLYP, BX	Polyp
4	CWR-P000000008	1900665400.A	DESCENDING COLON POLYP COLD BX	Y	DESCENDING COLON, BIOPSY: -- COLONIC MUCOSA DEMONSTRATING FOCAL SURFACE HYPERPLASTIC FEATURES.	Received in formalin, labeled with the patient's name, number, and A., are two irregular white to tan soft tissue fragments measuring less than 0.1 x 0.1 x 0.1 cm, and 0.3 x 0.2 x 0.1 cm. Submitted in toto in one cassette <***initials***>	GASTROINTESTINAL	COLON	BIOPSY	POLYP, BX	Polyp
5	CWR-P000000008	1900641511.A	SIGMOID POLYP	N	SIGMOID POLYP: SMALL TUBULAR ADENOMA. <***initials***>	sigmoid polyp, is a tan to yellow, irregular, soft tissue fragment, measuring 0.3 x 0.15 x 0.15 cm. Submitted in toto in one cassette <***initials***>	UNKNOWN, SEE REQUISITION LABEL	UNKNOWN	UNKNOWN	UNRECOGNIZED PART TYPE	Unknown
6	CWR-P000000008	1900665400.B	TRANSVERSE POLYP COLD BX	Y	TRANSVERSE COLON, BIOPSY: -- TUBULAR ADENOMA.	Received in formalin, labeled with the patient's name, number, and B., are two irregular tan soft tissue fragments measuring 0.2 x 0.1 x 0.1 cm, and 0.3 x 0.2 x 0.1 cm. Submitted in toto in one cassette <***initials***>	GASTROINTESTINAL	COLON	BIOPSY	POLYP, BX	Polyp
7	CWR-P000000262	1900794354.A	URETERAL BX	Y	URETER, BIOPSY: --FRAGMENTS OF SCARRING FIBROMUSCULAR TISSUE (CLINICAL HISTORY OF HYDRONEPHROSIS). <***initials***>	Received in formalin, labeled with the patient's name and number, is one irregular, pale yellow, soft tissue fragment	UNKNOWN, SEE REQUISITION LABEL	UNKNOWN, SEE REQUISITION LABEL	BIOPSY	BX, OTHER	Biopsy, other

#	Patient Case Number	Part Requisition Label	Organ System	Organ Name	Procedure Name	Part Type Name	Original Part Type	Block Id	No of pieces	Block Description	Slide Label	DICOM Identifier
41	CWR-P000000262	BONE MARROW BX	HEMATOPATHOLOGY	BLOOD/BONE MARROW/BODILY FLUIDS	BONE MARROW CORE BIOPSY	BX, BONE MARROW BIOPSY	Bone marrow	1	1		H&E (1)	1900771169.B.1.5
42	CWR-P000000262	BONE MARROW BX	HEMATOPATHOLOGY	BLOOD/BONE MARROW/BODILY FLUIDS	BONE MARROW CORE BIOPSY	BX, BONE MARROW BIOPSY	Bone marrow	1	1		R NEG	1900771169.B.1.18
43	CWR-P000000262	BONE MARROW BX	HEMATOPATHOLOGY	BLOOD/BONE MARROW/BODILY FLUIDS	BONE MARROW CORE BIOPSY	BX, BONE MARROW BIOPSY	Bone marrow	1	1		M Neg	1900771169.B.1.17
44	CWR-P000000262	BONE MARROW BX	HEMATOPATHOLOGY	BLOOD/BONE MARROW/BODILY FLUIDS	BONE MARROW CORE BIOPSY	BX, BONE MARROW BIOPSY	Bone marrow	1	1		CD 20	1900771169.B.1.14
45	CWR-P000000262	BONE MARROW BX	HEMATOPATHOLOGY	BLOOD/BONE MARROW/BODILY FLUIDS	BONE MARROW CORE BIOPSY	BX, BONE MARROW BIOPSY	Bone marrow	1	1		CD 3	1900771169.B.1.13
46	CWR-P000000262	CERVICAL BX 6 0	OB/GYN	CERVIX	BIOPSY	BX, CERVICAL (NOT CONE/LEEP)	Cervix	1	2		H&E ()	1900766173.C.1.6
47	CWR-P000000262	CERVICAL BX 6 0	OB/GYN	CERVIX	BIOPSY	BX, CERVICAL (NOT CONE/LEEP)	Cervix	1	2		H&E (1)	1900766173.C.1.5
48	CWR-P000000262	CERVICAL BX 6 0	OB/GYN	CERVIX	BIOPSY	BX, CERVICAL (NOT CONE/LEEP)	Cervix	1	2		H&E ()	1900766173.C.1.6
49	CWR-P000000262	CERVICAL BX 6 0	OB/GYN	CERVIX	BIOPSY	BX, CERVICAL (NOT CONE/LEEP)	Cervix	1	2		H&E (1)	1900766173.C.1.5
50	CWR-P000000262	BONE MARROW BX	HEMATOPATHOLOGY	BLOOD/BONE MARROW/BODILY FLUIDS	BONE MARROW CORE BIOPSY	BX, BONE MARROW BIOPSY	Bone marrow	2	99		H&E (1)	1900771169.B.2.9
51	CWR-P000000262	BONE MARROW BX	HEMATOPATHOLOGY	BLOOD/BONE MARROW/BODILY FLUIDS	BONE MARROW CORE BIOPSY	BX, BONE MARROW BIOPSY	Bone marrow	2	99		H&E ()	1900771169.B.2.10
52	CWR-P000000262	BONE MARROW BX	HEMATOPATHOLOGY	BLOOD/BONE MARROW/BODILY FLUIDS	BONE MARROW CORE BIOPSY	BX, BONE MARROW BIOPSY	Bone marrow	2	99		H&E (1)	1900771169.B.2.9
53	CWR-P000000262	BONE MARROW BX	HEMATOPATHOLOGY	BLOOD/BONE MARROW/BODILY FLUIDS	BONE MARROW CORE BIOPSY	BX, BONE MARROW BIOPSY	Bone marrow	2	99		H&E ()	1900771169.B.2.10
54	CWR-P000000262	RT BREAST CALCIFICATIONS	BREAST	BREAST	CORE BIOPSIES	BX, BREAST	Breast	1	99		H&E ()	1900771920.A.1.3
55	CWR-P000000262	RT BREAST CALCIFICATIONS	BREAST	BREAST	CORE BIOPSIES	BX, BREAST	Breast	1	99		H&E ()	1900771920.A.1.2
56	CWR-P000000262	RT BREAST CALCIFICATIONS	BREAST	BREAST	CORE BIOPSIES	BX, BREAST	Breast	1	99		H&E (1)	1900771920.A.1.1
57	CWR-P000000262	RT BREAST CALCIFICATIONS	BREAST	BREAST	CORE BIOPSIES	BX, BREAST	Breast	1	99		H&E ()	1900771920.A.1.3
58	CWR-P000000262	RT BREAST CALCIFICATIONS	BREAST	BREAST	CORE BIOPSIES	BX, BREAST	Breast	1	99		H&E ()	1900771920.A.1.2
59	CWR-P000000262	RT BREAST CALCIFICATIONS	BREAST	BREAST	CORE BIOPSIES	BX, BREAST	Breast	1	99		H&E (1)	1900771920.A.1.1
60	CWR-P000000262	ENDOCERVICAL CURRITAGE ECC	OB/GYN	CERVIX	CURETTAGE	BX, ENDOCERVICAL CURETTINGS	Endocervix	1	1		H&E ()	1900766173.A.1.2

Links to Tissue Bank Inventory



Query Engine

All CWR Welcome Ashok Patel 10/19/2008 User Account Comments Documentation Change Application Logout

Administrator Edit Standard View Edit Extended View Edit My Case List View Search By Criteria Case # Display My Case List Edit My Profile My Views My Case List Request/Assistance Asst. Search Order Spec.

Search Result Standard Views Extended Views My Views Other Views Show Query Criteria New Search

Standard View BSM data Description of This View Print Search Result

200810192342 Search Result 1-20 of 227 Display All

	Patient Case Number	TPN #	Procedure Date	Protocol Nbr	Specimen #	Frozen Date and Time	Specimen Type	Body Site	Tumor Site	Histologic Type	Secondary Body Site	Secondary Tumor Site	Pathology Status	Specimen Source	Preparation	Quantity	
1	CWR-P000001755	4070434		CWRU4Y02	2947	1230	Tissue	Colon, NOS	Sigmoid colon	Adenocarcinoma, NOS			Cancerous - Primary	Surgery	Block	0	g
2	CWR-P000001755	4070434		CWRU4Y02	2382	1230	Tissue	Colon, NOS	Sigmoid colon				Normal Adjacent (NAT) from Primary	Surgery	Frozen	0	g
3	CWR-P000001755	4070434		CWRU4Y02	2381	1230	Tissue	Colon, NOS	Sigmoid colon				Normal Adjacent (NAT) from Primary	Surgery	Frozen	0	g
4	CWR-P000001755	4070434		CWRU4Y02	2380	1230	Tissue	Colon, NOS	Sigmoid colon	Adenocarcinoma, NOS			Cancerous - Primary	Surgery	Frozen	0	g
5	CWR-P000001755	4070434		CWRU4Y02	2379	1230	Tissue	Colon, NOS	Sigmoid colon	Adenocarcinoma, NOS			Cancerous - Primary	Surgery	Frozen	0	g
6	CWR-P000001755	4070434		CWRU4Y02	2948	1230	Tissue	Colon, NOS	Sigmoid colon				Normal Adjacent (NAT) from Primary	Surgery	Block	0	g
7	CWR-P000008924	4080236		CWRU4Y02	4316	0100	Tissue	Brain, NOS	Temporal lobe, NOS				Normal	Autopsy	Frozen	1	g
8	CWR-P000008924	4080236		CWRU4Y02	4317	0100	Tissue	Brain, NOS	Occipital lobe, NOS				Normal	Autopsy	Frozen	1	g
9	CWR-P000008924	4080236		CWRU4Y02	4308	0100	Tissue	Lymph node, NOS	Lymph node, NOS				Normal	Autopsy	Fixed	0	g
10	CWR-P000008924	4080236		CWRU4Y02	4309	0100	Tissue	Liver, NOS	Liver, NOS				Normal	Surgery	Frozen	1	g
11	CWR-P000008924	4080236		CWRU4Y02	4310	0100	Tissue	Liver, NOS	Liver, NOS				Normal	Surgery	Frozen	1	g
12	CWR-P000008924	4080236		CWRU4Y02	4311	0100	Tissue	Liver, NOS	Liver, NOS				Normal	Surgery	Frozen	4	g
13	CWR-P000008924	4080236		CWRU4Y02	4312	0100	Tissue	Spinal cord, NOS	Spinal cord, NOS				Normal	Autopsy	Frozen	1	cr
14	CWR-P000008924	4080236		CWRU4Y02	4315	0100	Tissue	Brain, NOS	Thalamus, NOS				Normal	Autopsy	Frozen	1	g
15	CWR-P000008924	4080236		CWRU4Y02	4306	0100	Tissue	Small intestine, NOS					Normal	Autopsy	Frozen		g
16	CWR-P000008924	4080236		CWRU4Y02	4319	0100	Tissue	Brain, NOS	Parietal lobe, NOS				Normal	Surgery	Frozen	1	g
17	CWR-P000008924	4080236		CWRU4Y02	4313	0100	Tissue	Brain, NOS	Brain, NOS				Normal	Autopsy	Frozen	2	g
18	CWR-P000008924	4080236		CWRU4Y02	4307	0100	Tissue	Colon, NOS	Colon, NOS				Normal	Autopsy	Frozen		g
19	CWR-P000008924	4080236		CWRU4Y02	4314	0100	Tissue	Brain, NOS	Frontal lobe, NOS				Normal	Autopsy	Frozen	2	g
20	CWR-P000008924	4080236		CWRU4Y02	4318	0100	Tissue	Brain, NOS	Brain, NOS				Normal	Autopsy	Frozen	1	g

Links to Cancer Registry Data

- Exports from Cancer Registry Systems

- NAACCR format (standardized)

- Provided as .DAT file

- Can read using NotePad reader, etc

Links to Cancer Registry Data

Abstract No. 28239 Held ?

Abstract Sections Display Types
WI_APV3

TREATMENT - 1ST COURSE

RX Date—Surgery 2004/ [REDACTED]

RX Date—Surgery Flag [REDACTED]

RX Summ—Surg Prim Site 23

RX Summ—Surg Oth Regl... 0 - None

RX Summ—Scope Reg L... 6 - Sentinel node biopsy and c

Reason for No Surgery 0 - Surgery of primary site perk

RX Date—Radiation 2004/ [REDACTED]

RX Date—Radiation Flag [REDACTED]

Rad—Regional RX Modality 25 - Photons (11-19 MV)

Reason for No Radiation 0 - Radiation therapy administ

RX Summ—Surg/Rad Seq 3 - Radiation after surgery

RX Date—Chemo 2003/ [REDACTED]

RX Date—Chemo Flag [REDACTED]

RX Summ—Chemo 03 - Chemotherapy, multiple a

RX Date—Hormone 2004/ [REDACTED]

RX Date—Hormone Flag [REDACTED]

RX Summ—Hormone 01 - Hormone therapy

RX Date—BRM [REDACTED]

RX Date—BRM Flag 11 - RX modality not given; aut

RX Summ—BRM 00 - None

RX Date—Other [REDACTED]

RX Date—Other Flag 11 - RX modality not performe

RX Summ—Other 0 - None

RX Summ—Transplnt/End... 00 - No transplant or endocrin

RX Date—Systemic 200 [REDACTED]

Lab Tests (Not Cytology or Histopathology)
ER-POS PR-POS C-ERB-NEG

OP/Surgical Procedures Staging Information

Pathology (Cytology and Histopathology Reports)
11/11 [REDACTED] LEFT BREAST, TRUE CUT BIOPSY: INVASIVE POORLY DIFFERENTIATED DUCTAL CARCINOMA, THE ADENOCARCINOMA OCCUPIES APPROXIMATELY 25% OF THE SUBMITTED MATE

Primary Site Title
LEFT BREAST

Histology Title (Type, Behavior, and Grade)
DUCTAL CARCINOMA

Staging Decisions
REGIONAL-LYM NDS

Surgery (Surgical Procedures for Treatment)
LEFT BREAST, TRUE CUT BIOPSY

Radiation (Beam)
9/ [REDACTED] RT 5040CGY TO BREAST W1400CGY "BOOST"

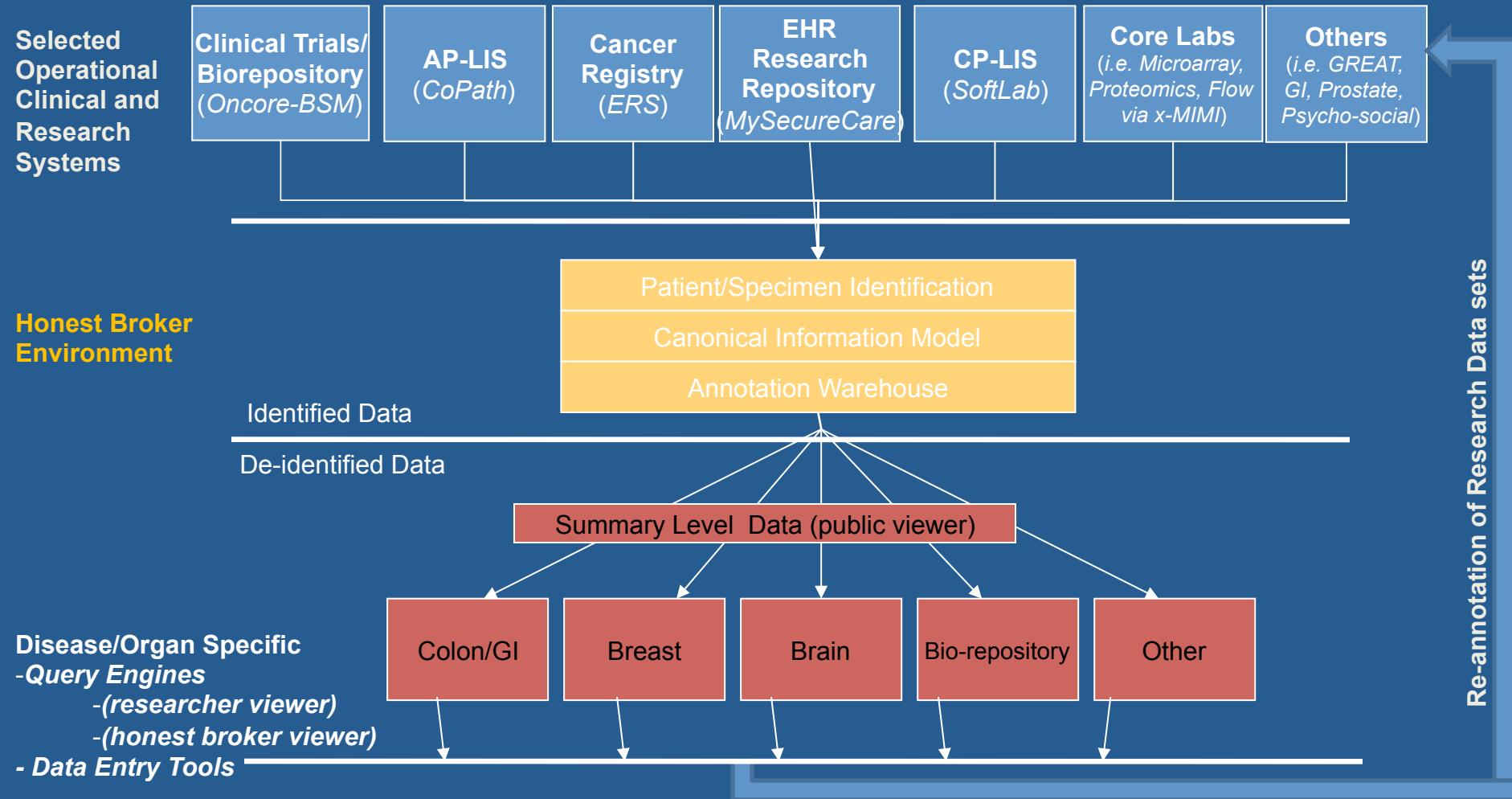
NAACCR v12 Translation Tool

- **NAACCR v12 SAS Translation Tool**
- **NAACCR v12 Microsoft Access Translation Tool**
- Approved by the NAACCR IT Committee

- Provided by **David O' Brien at the Alaska Cancer Registry**
 - Users familiar with Microsoft Access will be able to import a NAACCR v12 file, which would then be available as a standard Access table. Once in a table format, queries can be written to select a subset of data items that could be transferred to Excel for additional analysis. Records in the table can be reviewed for quality control (QC), modified, and then exported back out again as a NAACCR v12 file. Anyone with questions about this tool should contact David O' Brien at the Alaska Cancer Registry at david.obrien@alaska.gov with questions or thoughts.

- <http://www.naacr.org/StandardsandRegistryOperations/NAACCRv12TransTools.aspx>

The Clinical Annotation Engine Overview



Research Scenario # 5

Prostate Gleason Grade Tissue Microarray

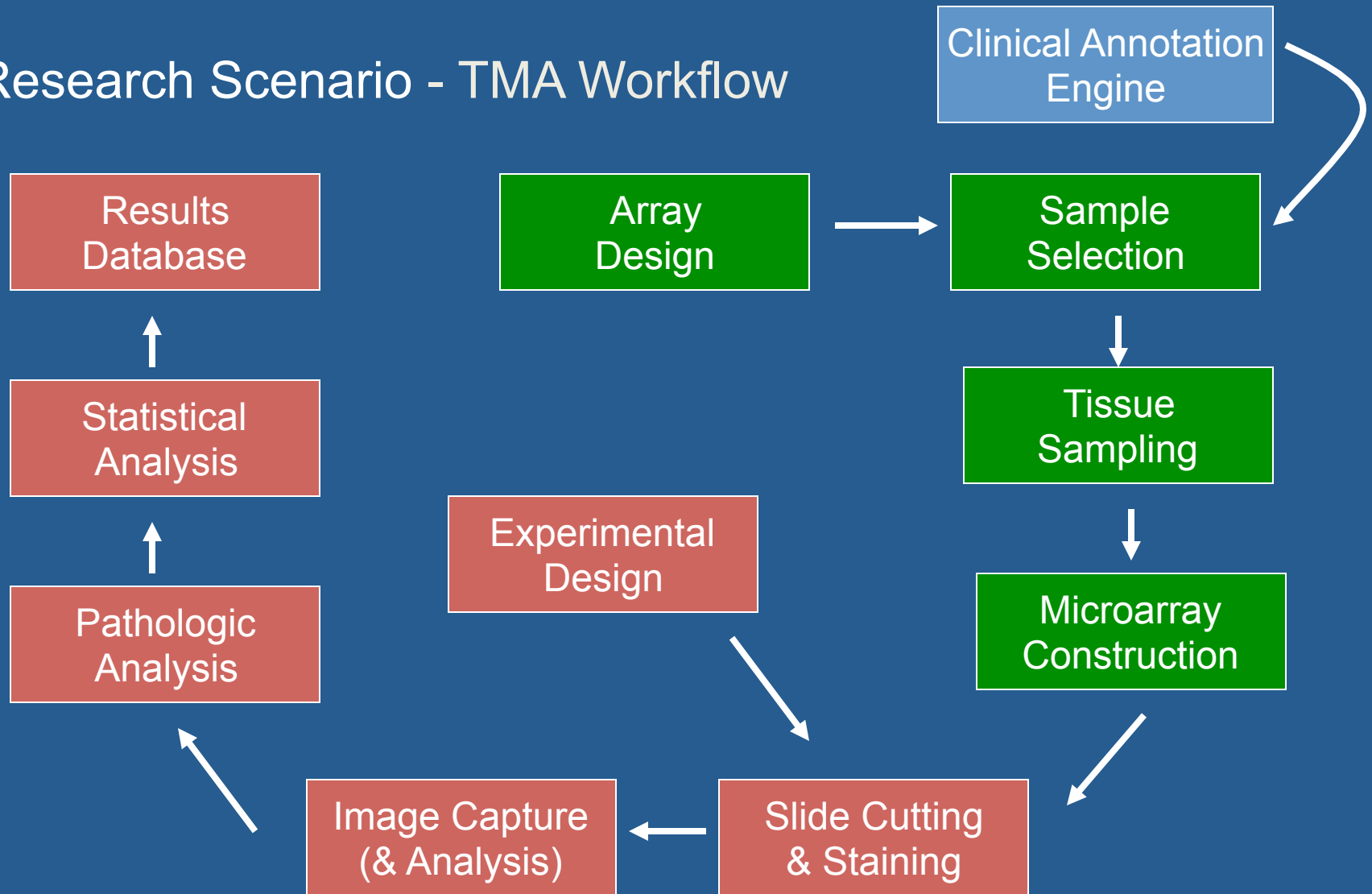
Research Scenario

We would like to construct a Gleason Grade TMA.

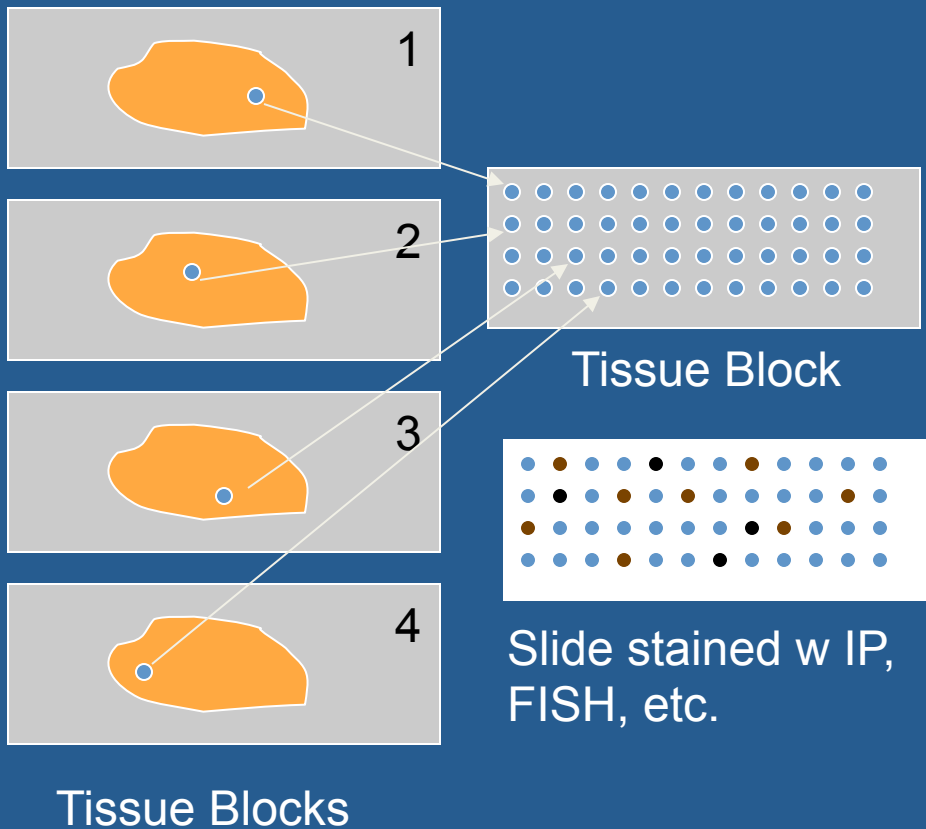
Can we have 50 cases of each Low, Intermediate, and High Grades?

Can we also have matching adjacent “normal” tissues?

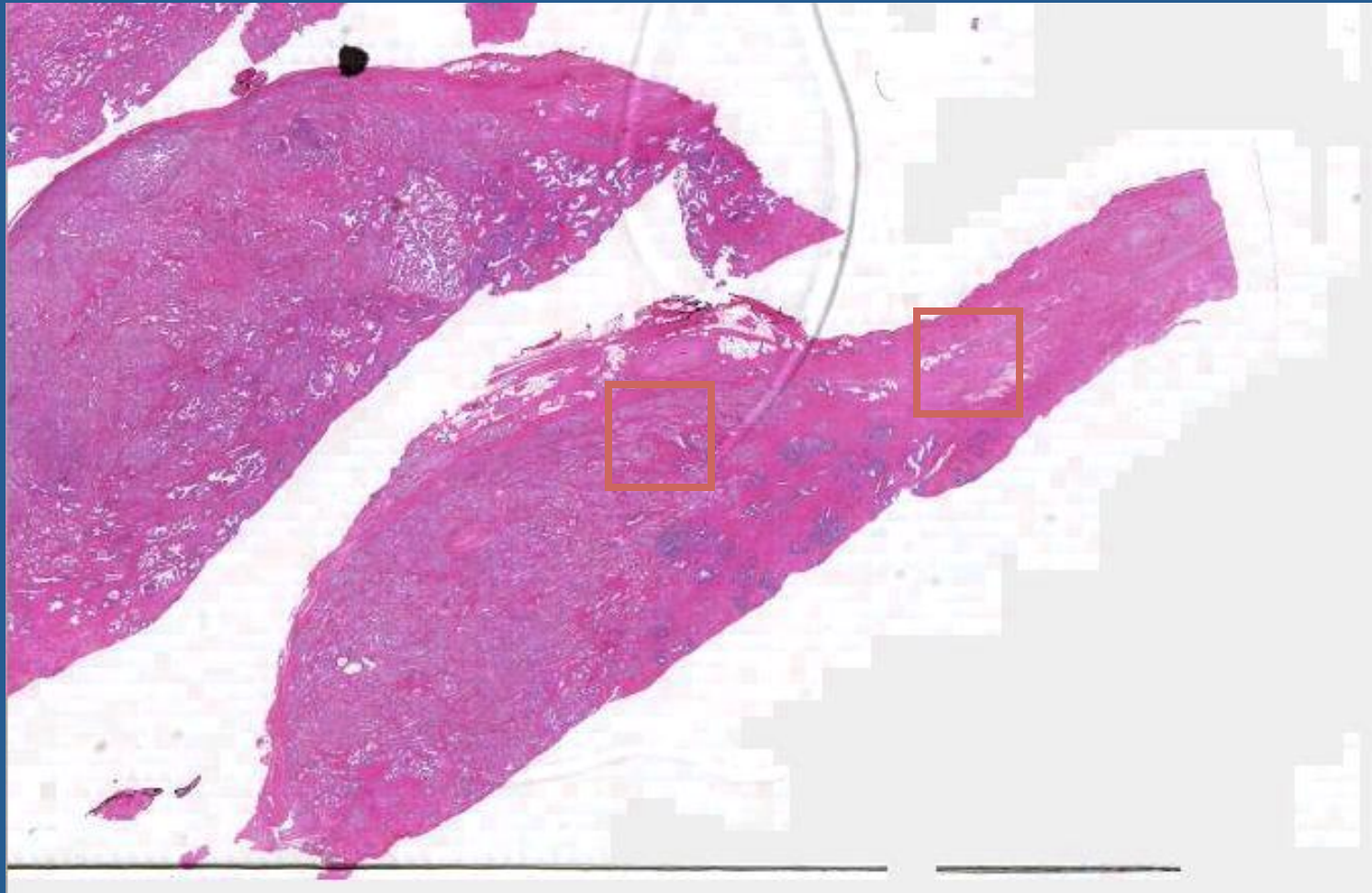
Research Scenario - TMA Workflow

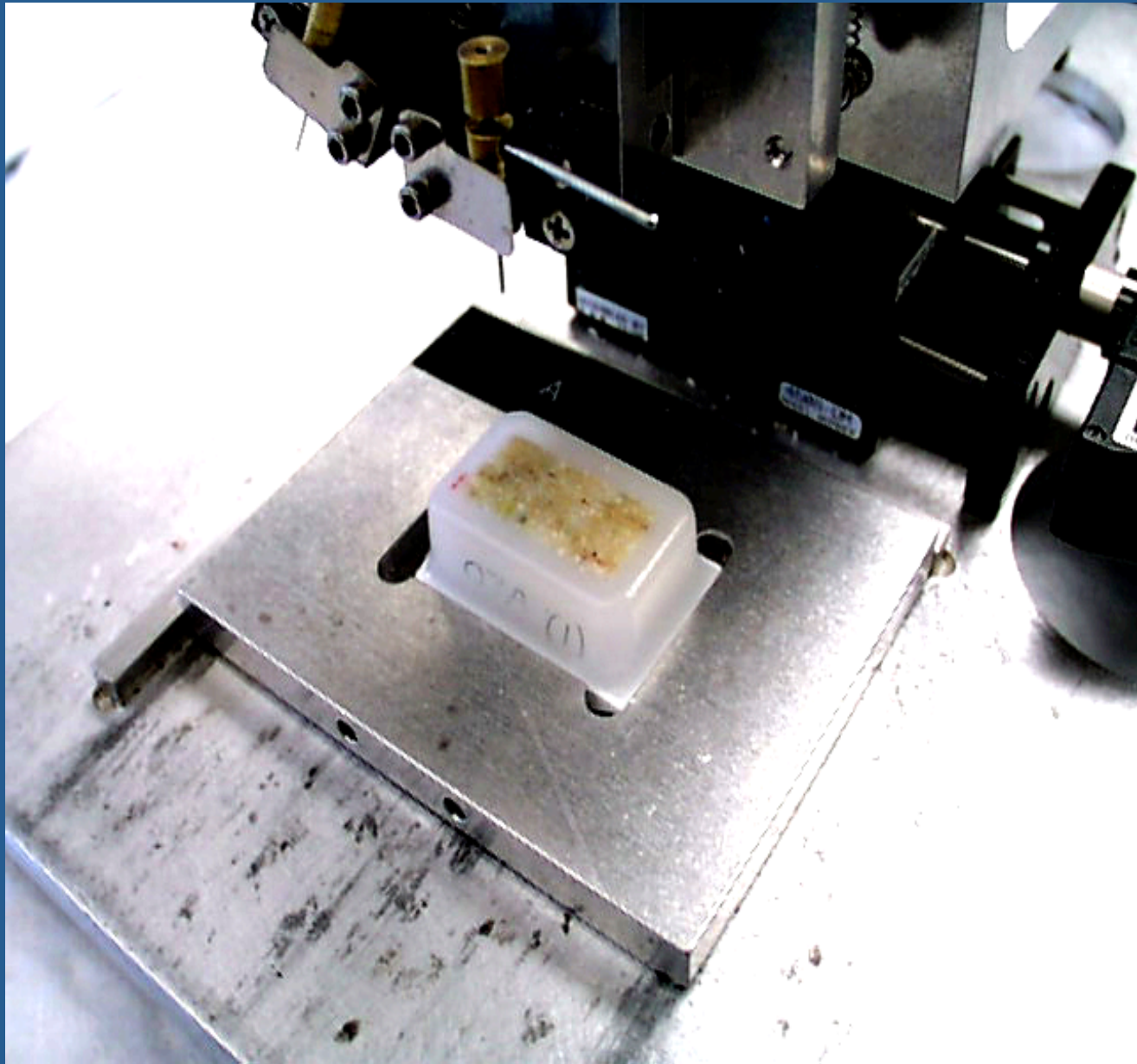


TMA construction

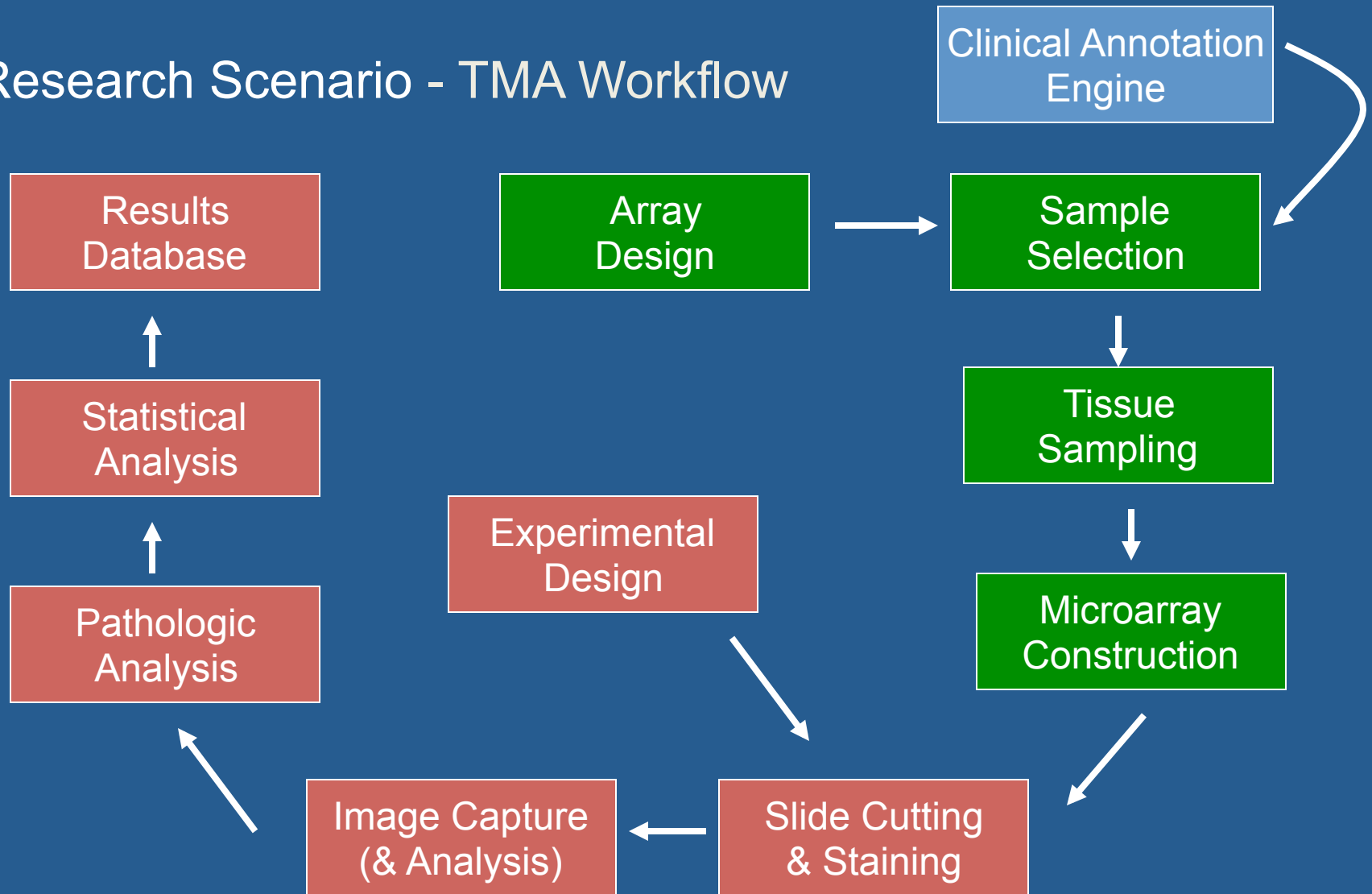


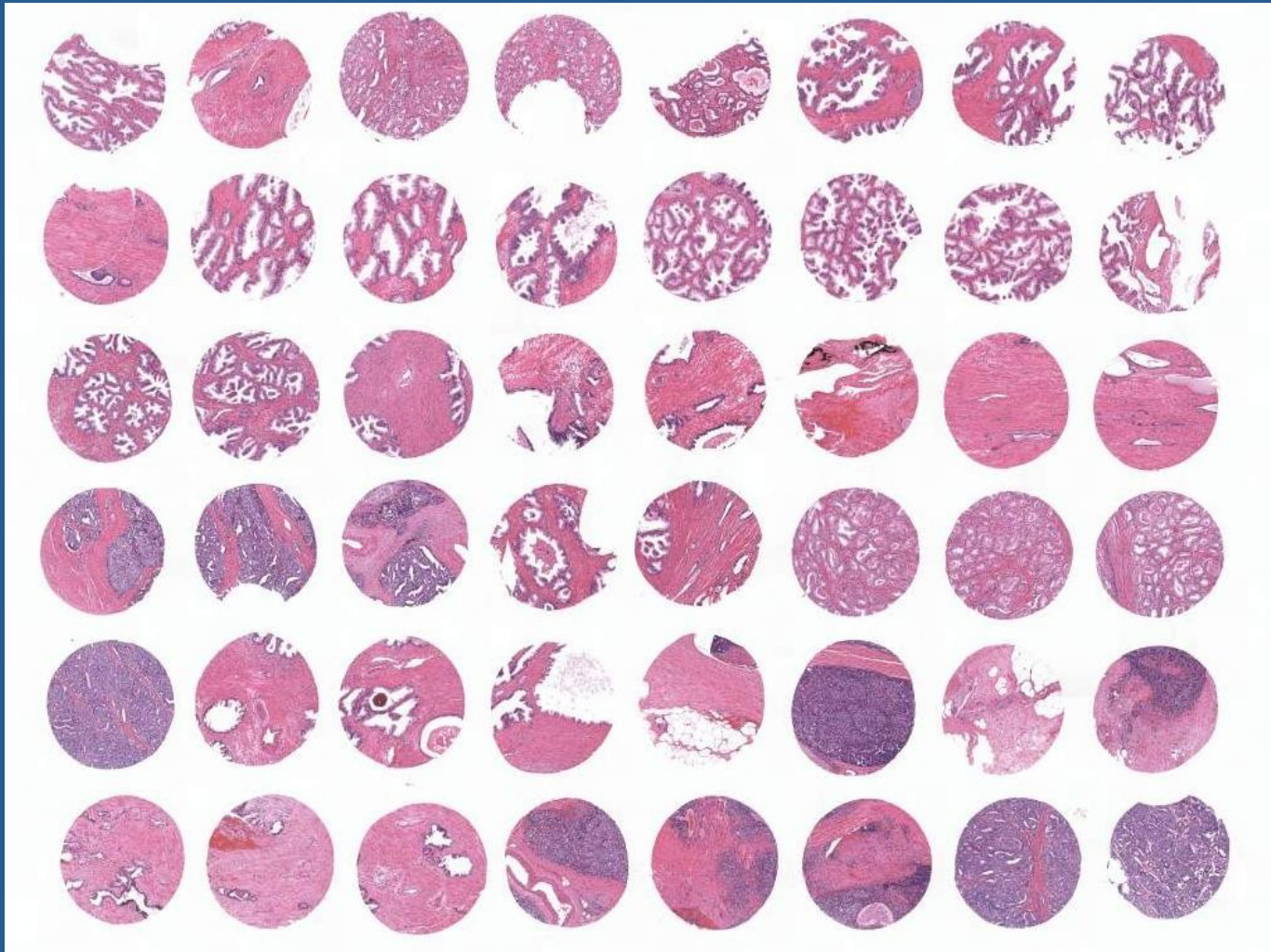
- Tissue Microarray (TMA): Paraffin block with multiple tissue cores
- Each core is from a different tissue specimen
- 2.0 - 0.6 mm cores from selected paraffin tissue sections
- ~ 300 cores in an organized grid
- Can evaluate hundreds of specimens in a slide
- Make hundreds of slides per array

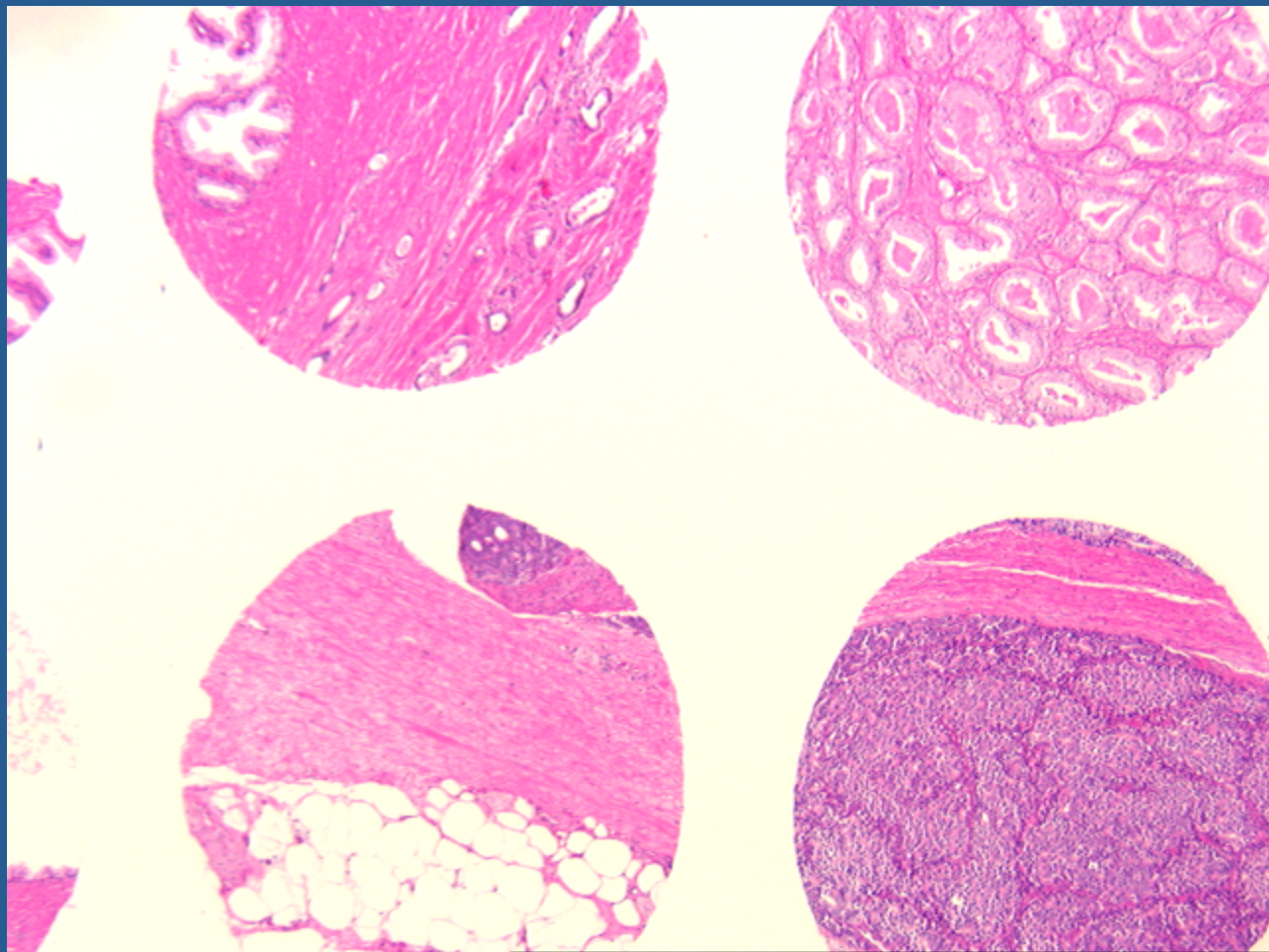




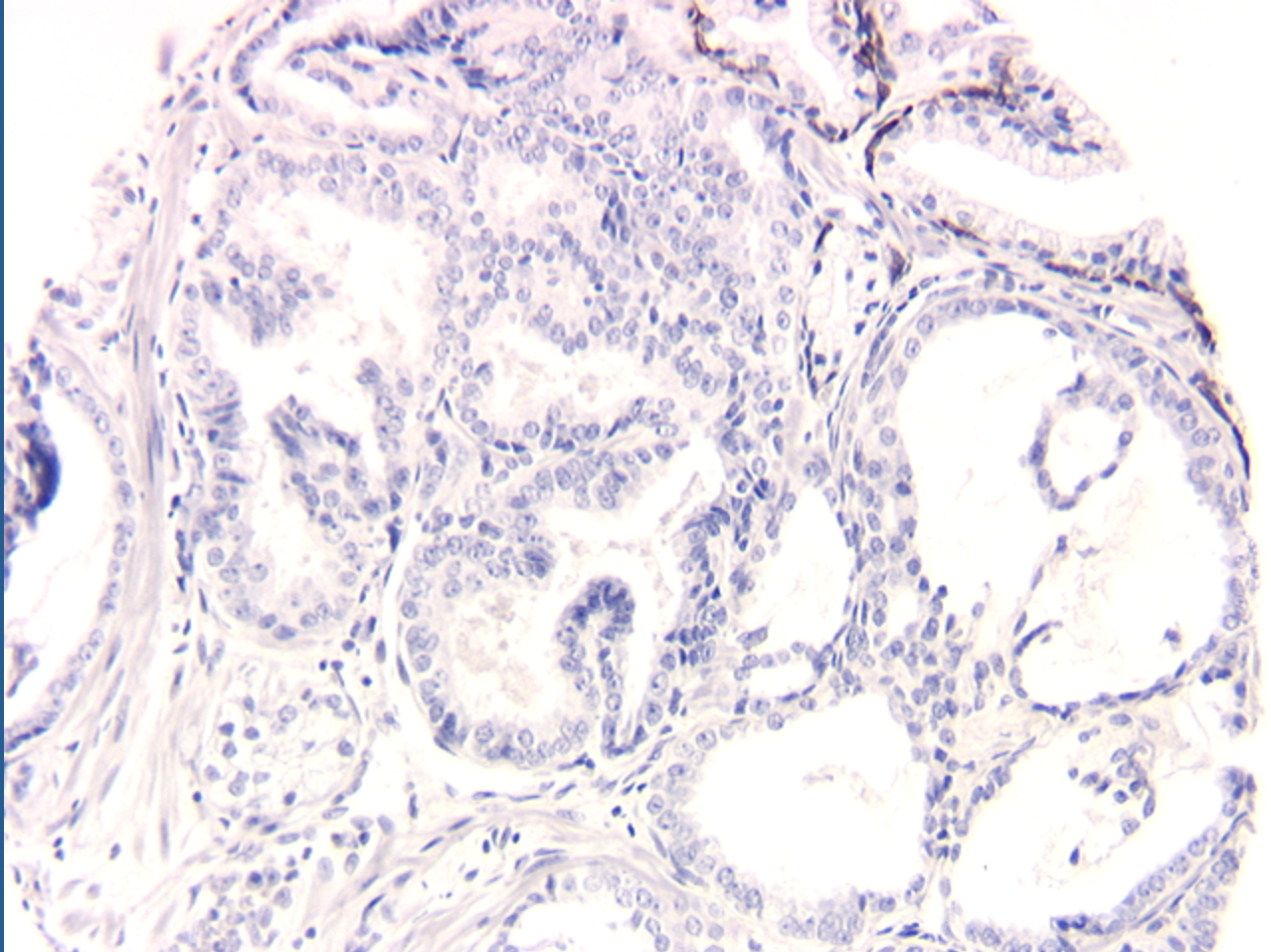
Research Scenario - TMA Workflow



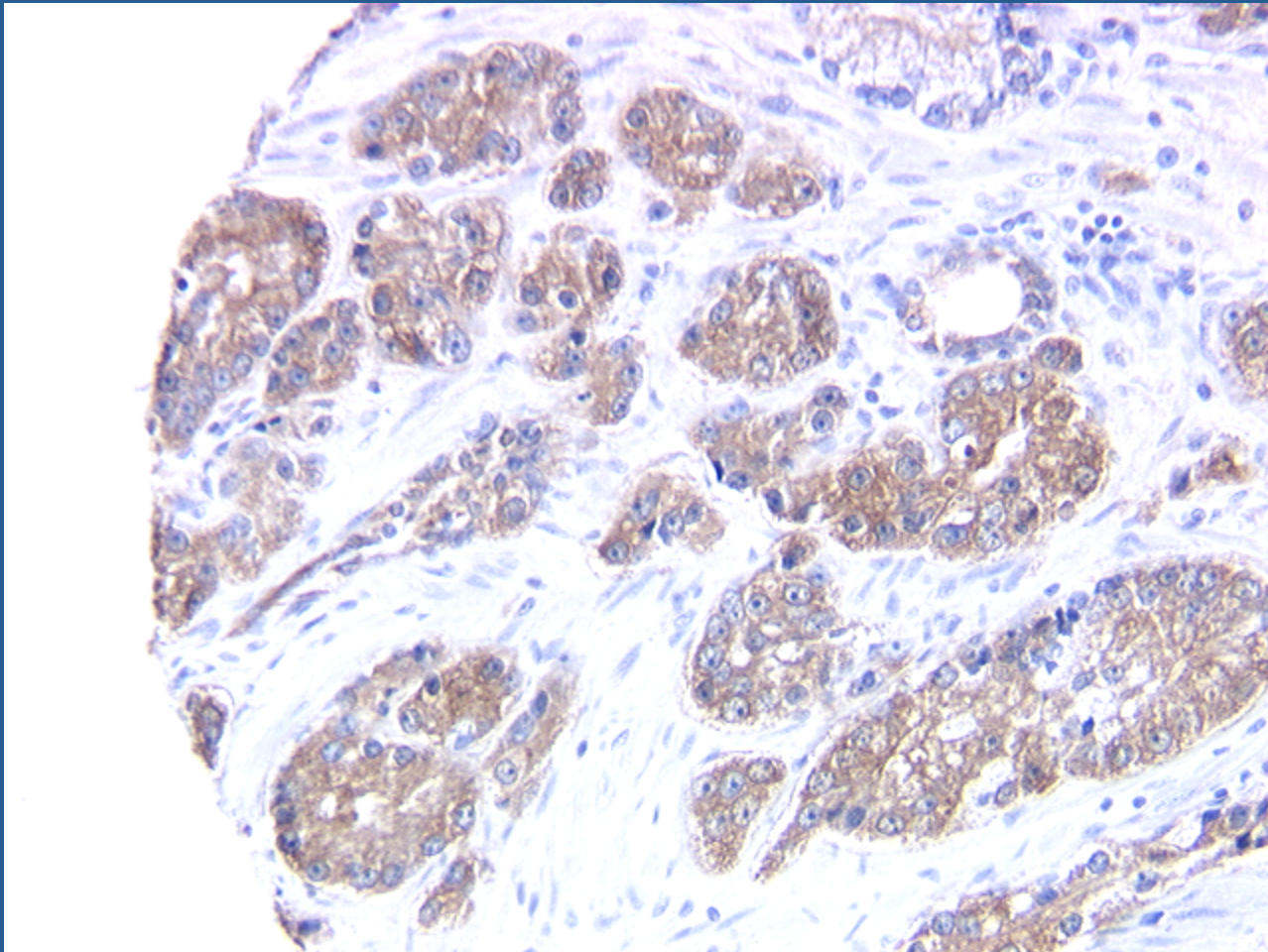


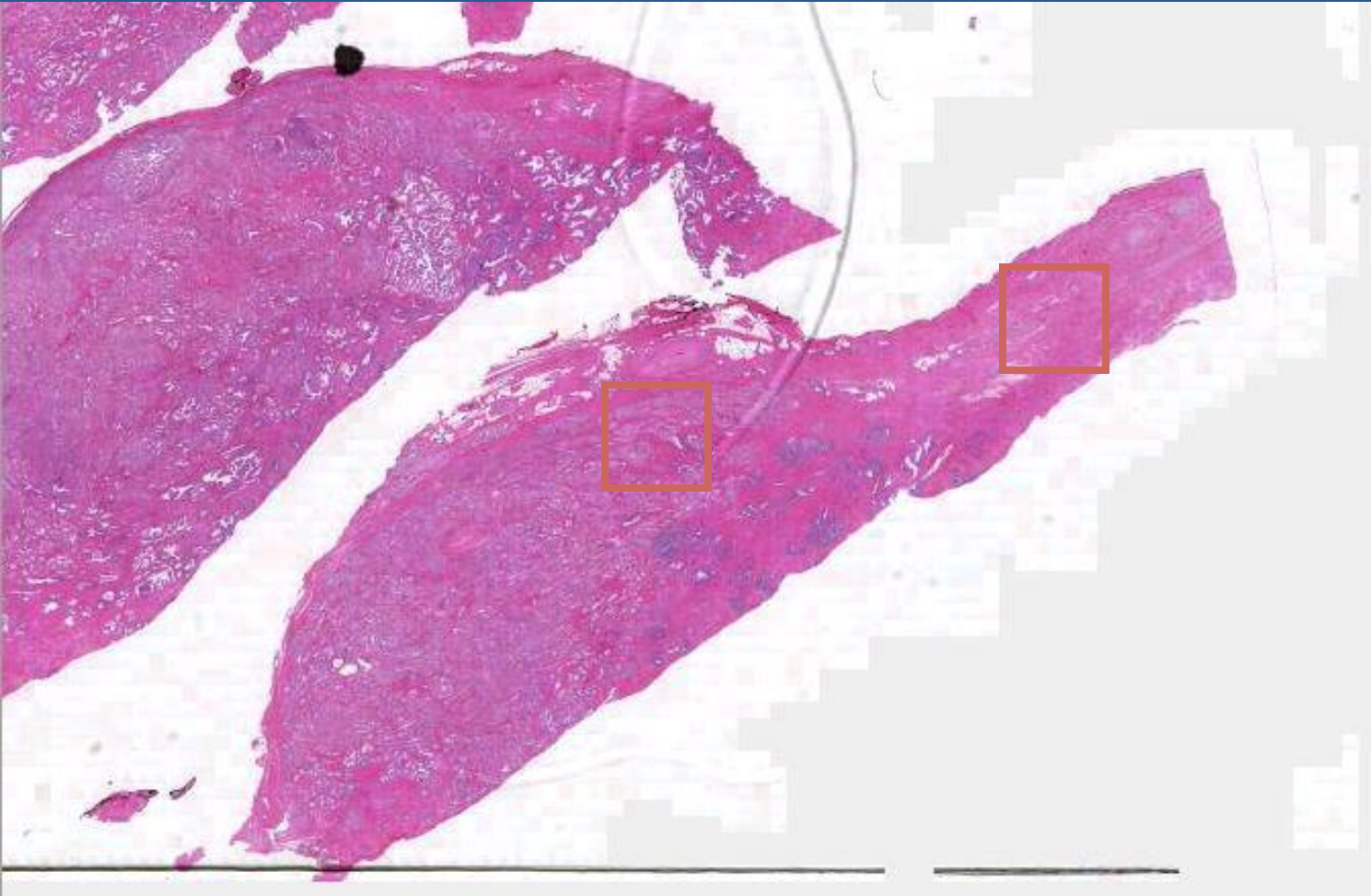


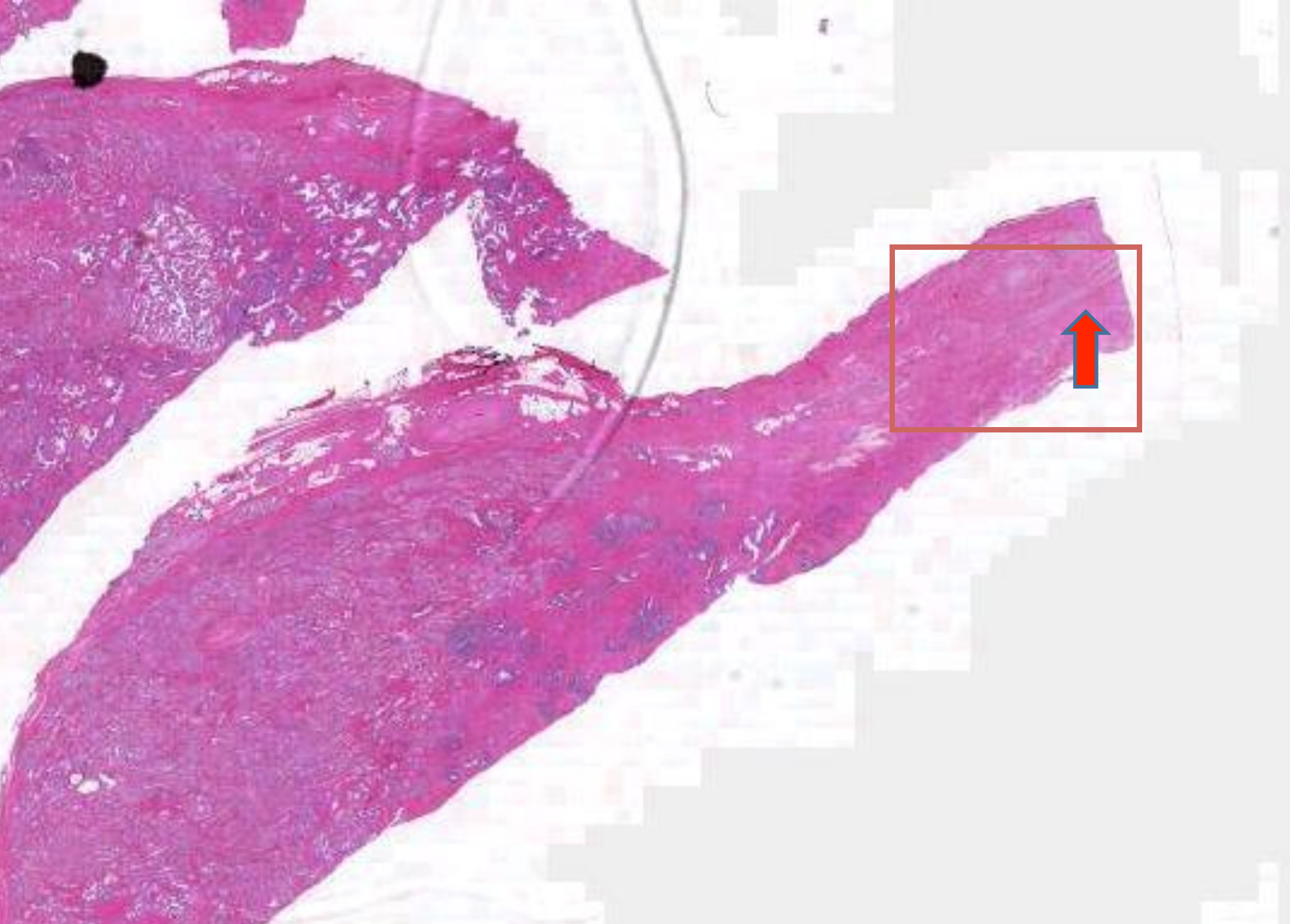
Tissue Arrays (CK 903).



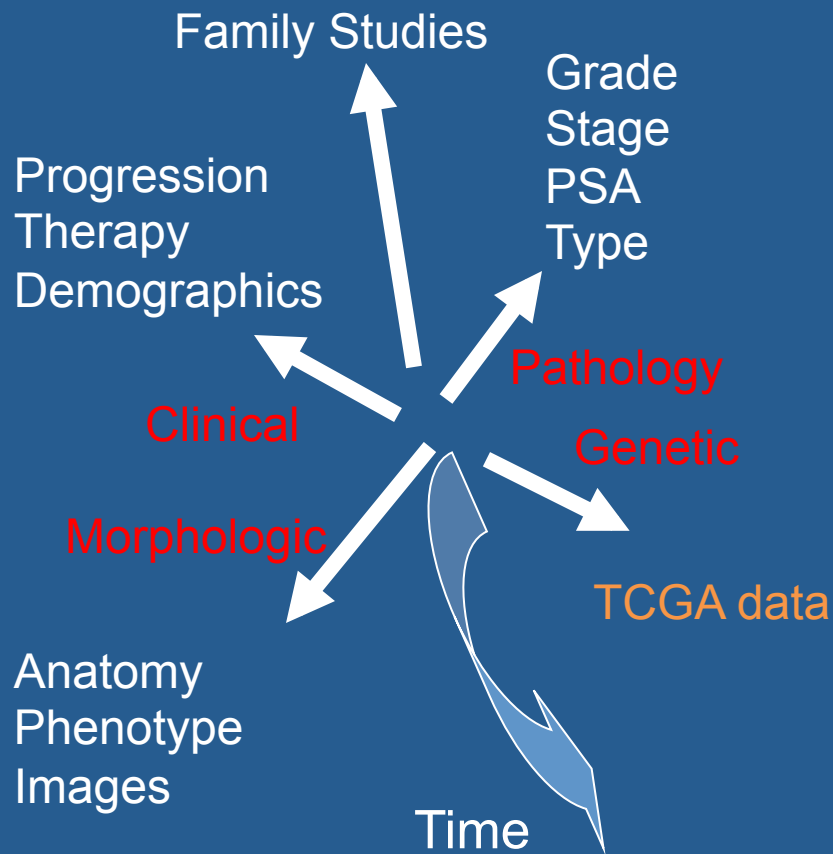
Tissue Arrays (PSA)







Summary: Tissue Annotation



- Tissue Data is complex and, potentially infinite...
- What data is “relevant”, what data is useful to researchers when they are searching for tissue specimens?

Summary

- Increase demand for structured data for biospecimen annotation
- There is no substitute for clear and consistent labeling when the data was collected and entered into your eClinical Systems
- Leverage existing Clinical Information Systems (pros/cons)
- Limitations to Clinical Systems exists, because we accept those limitations
- With a great deal of effort, one can parse clinical data so that the data components are addressable

Summary

- Researchers must not assume the clinical data provided to you is correct, but also *understand* it and *question its origin*
- Get involved and collaborate with someone from Pathology who can add value to your research project
- Find Physicians/Fellows/Residents as your CLINICAL partner
- Work with Cancer Registrars to help you find cohorts of clinical patients with outcomes data
- Do not rush to start your experiments. Take time to have a well-designed study.
- If your research data has outliers that you did not expect, go back and review the process you used. DO NOT GET DISCOURAGED!!!!

Thank You.

“If everyone is thinking alike, then someone isn’ t thinking.” –George S. Patton, Jr.

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ashok.patel@case.edu

216-368-5106



NAACCR v12 Microsoft Access Translation Tool

The screenshot shows a Microsoft Access window titled "1Read Me - Microsoft Access". The ribbon is set to "Table Tools" with the "Datasheet" tab selected. A table is displayed with the following data:

Comment	ID	Add New Field
File Name: NAACCR Import v12.mdb	1	
By David K. O'Brien, PhD, GISP	2	
Alaska Cancer Registry	3	
Email: david.obrien@alaska.gov	4	
Phone: 907-269-8047	5	
Alaska Cancer Registry	6	
Last Updated: July 11, 2011	7	
	8	
This MS Access database contains an import/export file specification for NAACCR v12 record layout files.	9	
It allows the user to import these types of files, perform operations on them, and then export them back o	10	
In MS Access 2003, these are the steps to import a NAACCR v12 file:	11	
- From the main menu options, choose FILE>GET EXTERNAL DATA>IMPORT	12	
- In the "Import" dialog box, in "Files of type", choose "Text Files".	13	
- Search for the file you wish to import. Select that file and click on the "Import" command button.	14	
- In the "Import Text Wizard" dialog box, select the "Fixed width" option. Click on the "Advanced..." com	15	
- In the "Import Specification" dialog box, click on the "Specs..." command button.	16	
- In the "Import / Export Specifications" dialog box, "Naaccr12" is selected. Click on the "Open" comman	17	
- Click on OK, Next, Next, Next, Next, then select No Primary Key, Next, Finish.	18	
*	(New)	

The status bar at the bottom indicates "Record: 2 of 18" and "No Filter". The window title bar shows "1Read Me - Microsoft Access".