

Conflict of Interest

• The speakers on this webinar will discuss their conflict of interest within their presentations.

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Marilyn Bui, MD, Ph.D., FCAP

Dr. Bui is the chair of the Digital and **Computational Pathology Committee, member of** the Council on Informatics and Pathology Innovation, Vice Speaker of the House of Delegates, and the ex-officio member of the Board of the Governors. She is a Senior Member in the **Department of Pathology at Moffitt Cancer Center** in Tampa, FL. She serves as the Scientific Director of Analytic Microscopy Core and the Section Head of Bone and Soft Tissue Pathology. She is also a **Professor at the University of South Florida (USF)** Morsani College of Medicine with adjunct faculty appointment at the Machine Learning Department of Moffitt.



The CAP Committee hosting this webinar

Digital and Computational Pathology Committee

 The charge of the Digital and Computational Pathology Committee (DCPC) is to advance the adoption of digital pathology within the CAP and to serve as a respected resource for information and education for pathologists, patients and the public on the practice and science of digital pathology.

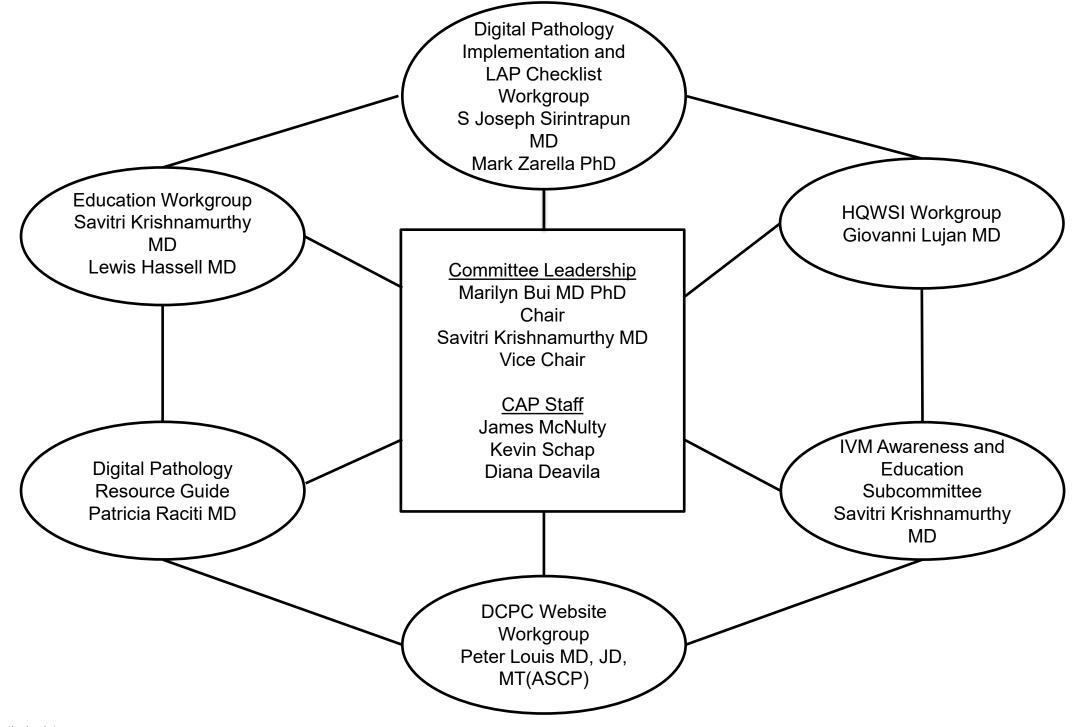
Committee Leadership

- Marilyn Bui, MD, PhD, FCAP Chair
- Savitri Krishnamurthy, MD, FCAP Vice Chair

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Digital and Computational Pathology Committee Structure



Composition of the DCPC

- Pathologists 24 with variety of specialty interests/niches
- Junior members 2
- Academic institutions > 18 represented.
- Private practice- at least 8 members, some with industry
- Expertise Informatics, digital pathology use, development, standards, and validation, AI, IVM/EVM, etc.



Savitri Krishnamurthy, MD, FCAP

Dr. Krishnamurthy is the vice chair of the **Digital and Computational Pathology Committee and is Professor of Pathology at** The University of Texas MD Anderson Cancer Center in Houston, TX. She completed her Pathology residency training in New England Medical Center, Tuft's University in Boston followed by fellowship training in Oncologic Pathology at Memorial **Sloan Kettering Cancer Center in New York** and Cytopathology at the University of **Texas MD Anderson Cancer Center.**



Webinar agenda

TOPICS	PRESENTERS
UHCMC Experience: Cerner CoPath and Epic	Dr. Asa
Duke Health Experience	Dr. Cardona
Spectrum Healthcare Partners Experience	Dr. Ahmad
A moderated discussion of audience questions	Drs. Bui and Krishnamurthy

Learning Objectives

- Learn from early adopters to improve documentation of the utilization of digital pathology CPT codes
- Recognize the recently established digital pathology CPT codes for Anatomic Pathology practice
- Understand the issues related to the establishment and utilization of digital pathology CPT codes

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UHCMC Experience: Cerner CoPathand Epic

Sylvia L. Asa, MD. PhD, FCAP

Sylvia L. Asa, MD, Ph.D., FCAP

Dr. Asa is Professor of Pathology at Case Western Reserve University and the lead for Digital Pathology at University Hospitals Cleveland Medical Center. She completed her PhD in Pathology and Pathology residency training at the University of Toronto, she developed her career as an Endocrine Pathologist in Toronto, and in 2000 she became the head of Canada's largest academic laboratory at University **Health Network where she implemented digital** pathology in 2004. She was the first to integrate digital pathology into the LIS for primary diagnosis in 2010. She moved her practice to Cleveland in 2019 to help UHCMC implement Digital Pathology.



UHCMC Digital Pathology

- History of Digital Pathology Implementation at UHCMC
- CPT coding in Cerner CoPath
- CPT coding in Epic
- Challenges
- Conclusions



Digital Pathology Implementation at UHCMC

- 2015 Sectra Implementation for Diagnostic Imaging
- Sectra Tumor Board module implemented
 - 2 Roche scanners (HT, DP200) additional
- 2019 Institutional approval to move forward with DP
 - Sectra integration with Cerner CoPath LIS
 - Initial validations

2020 Covid......



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Digital Pathology Implementation at UHCMC

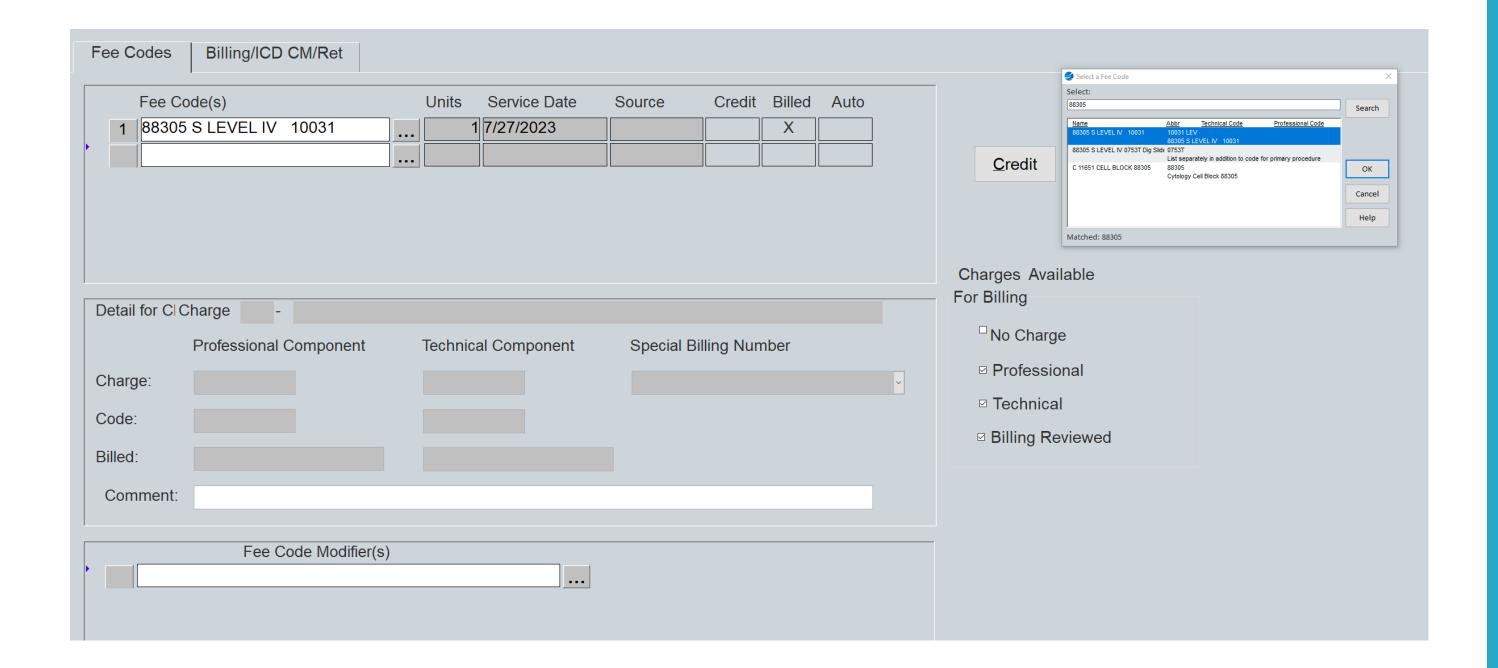
- 2022 Purchase of high throughput scanners approved
 - Initial validations completed
 - Endocrine service initiated
- 2023 Go-live for primary diagnosis for Endocrine and Dermatopathology
- October 1, 2023: Epic Go-Live
- 2024 All community pathology done digitally; neuropathology, bone and soft tissue
- Others to follow

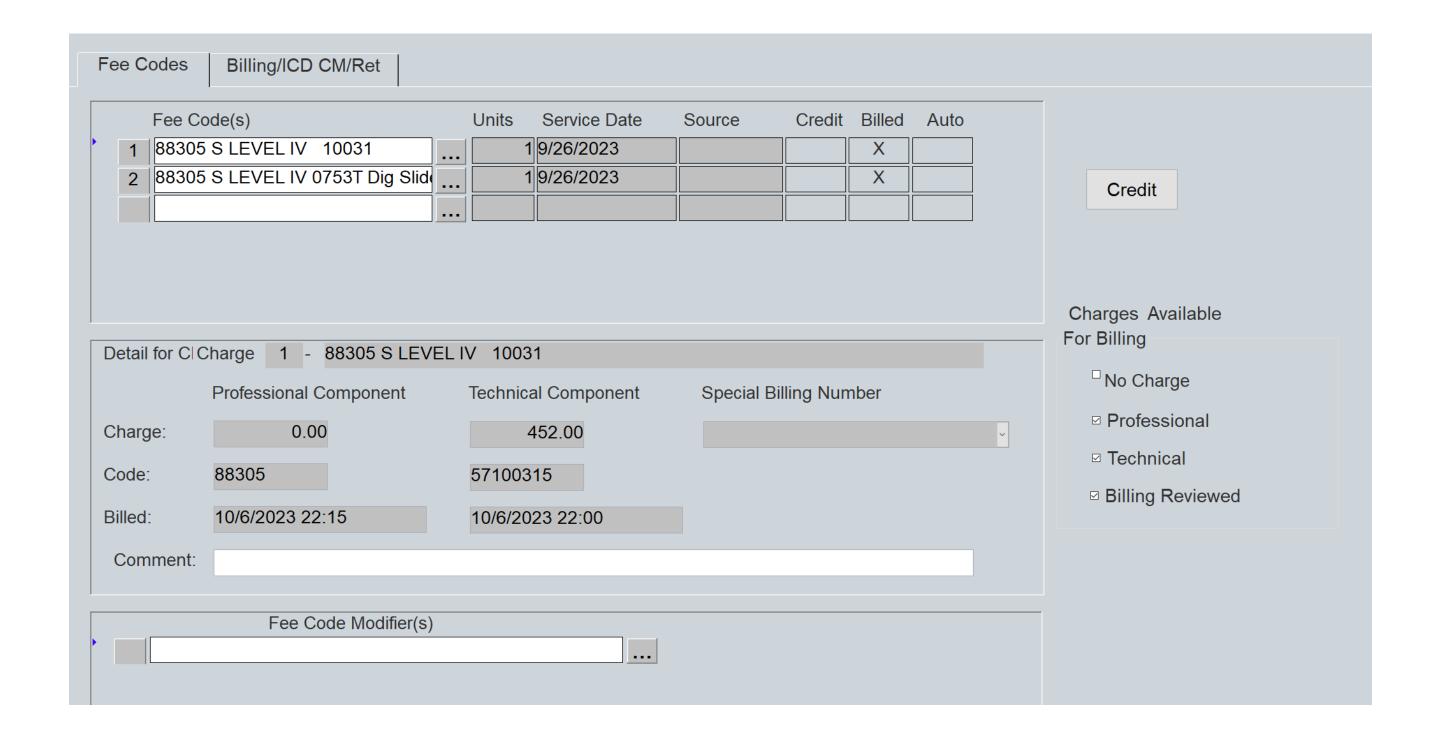
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CPT Coding for Digital Pathology

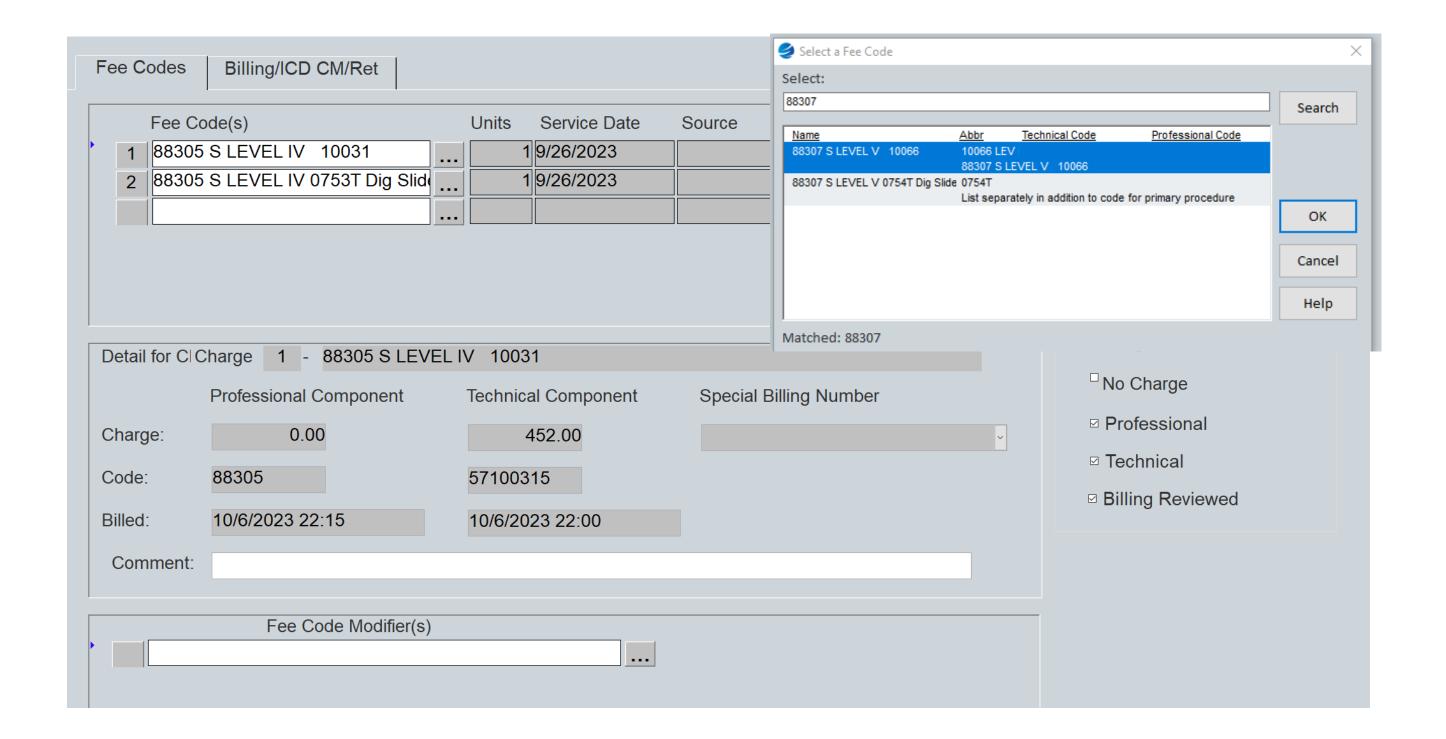
- October 2022 CPT category III Codes available
- November 2022 Codes introduced into Cerner CoPath billing module
- January 2023 Codes implemented

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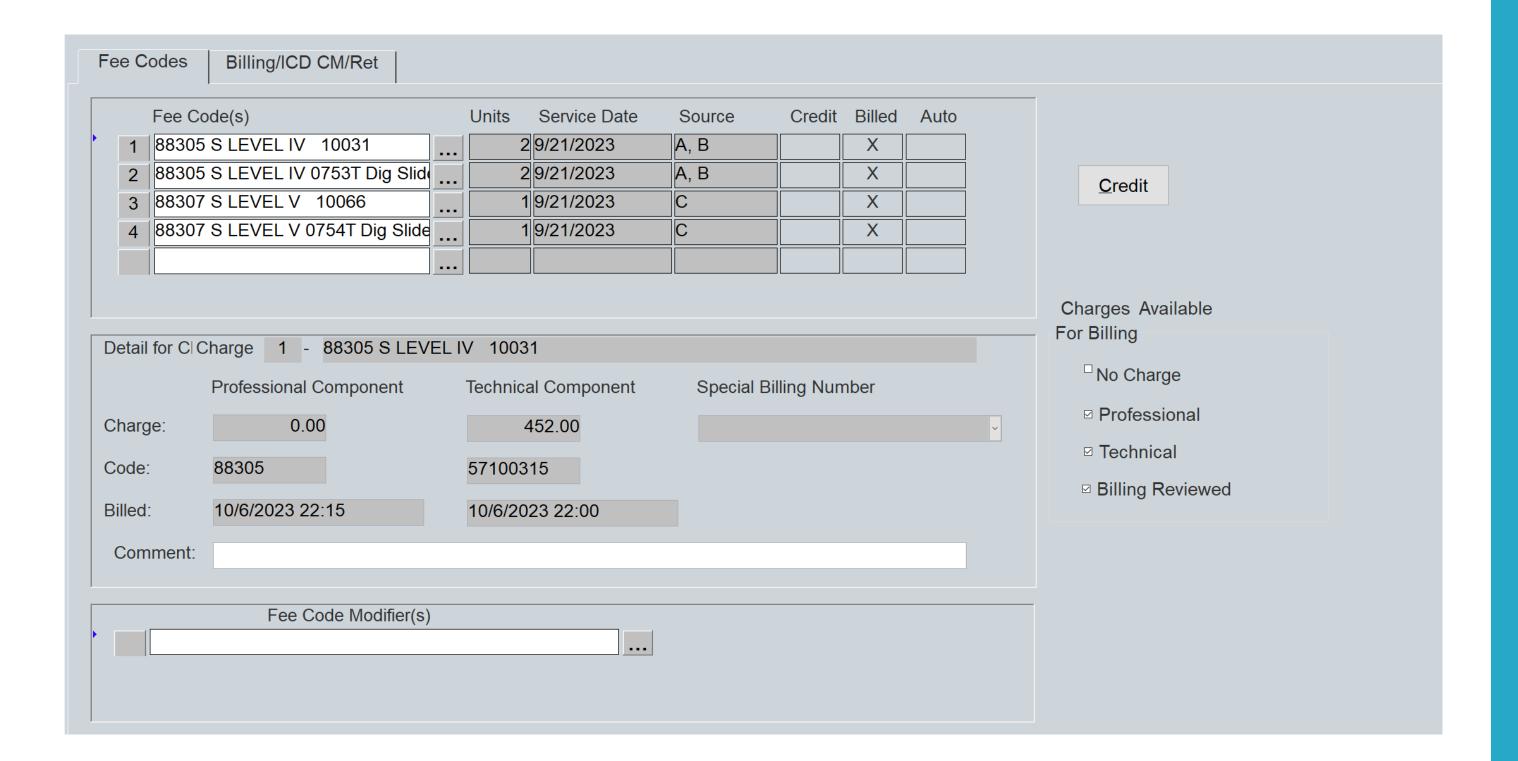




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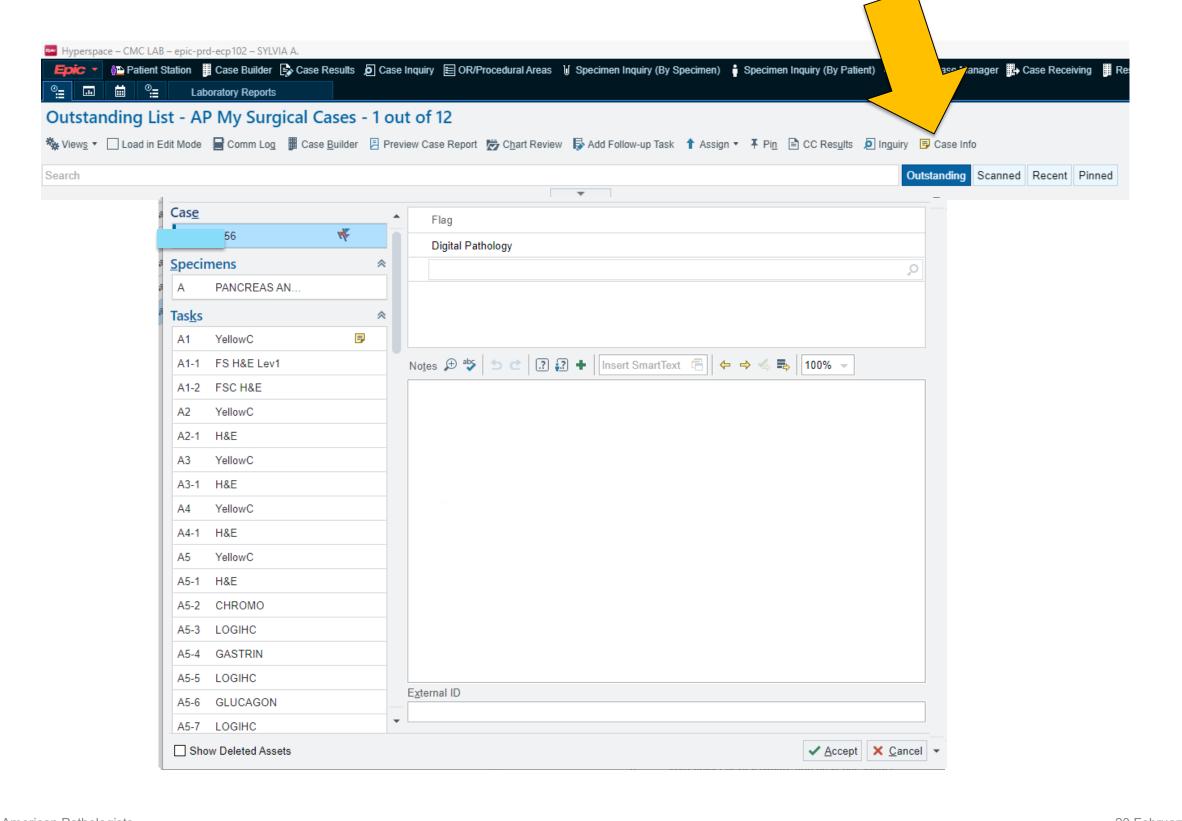
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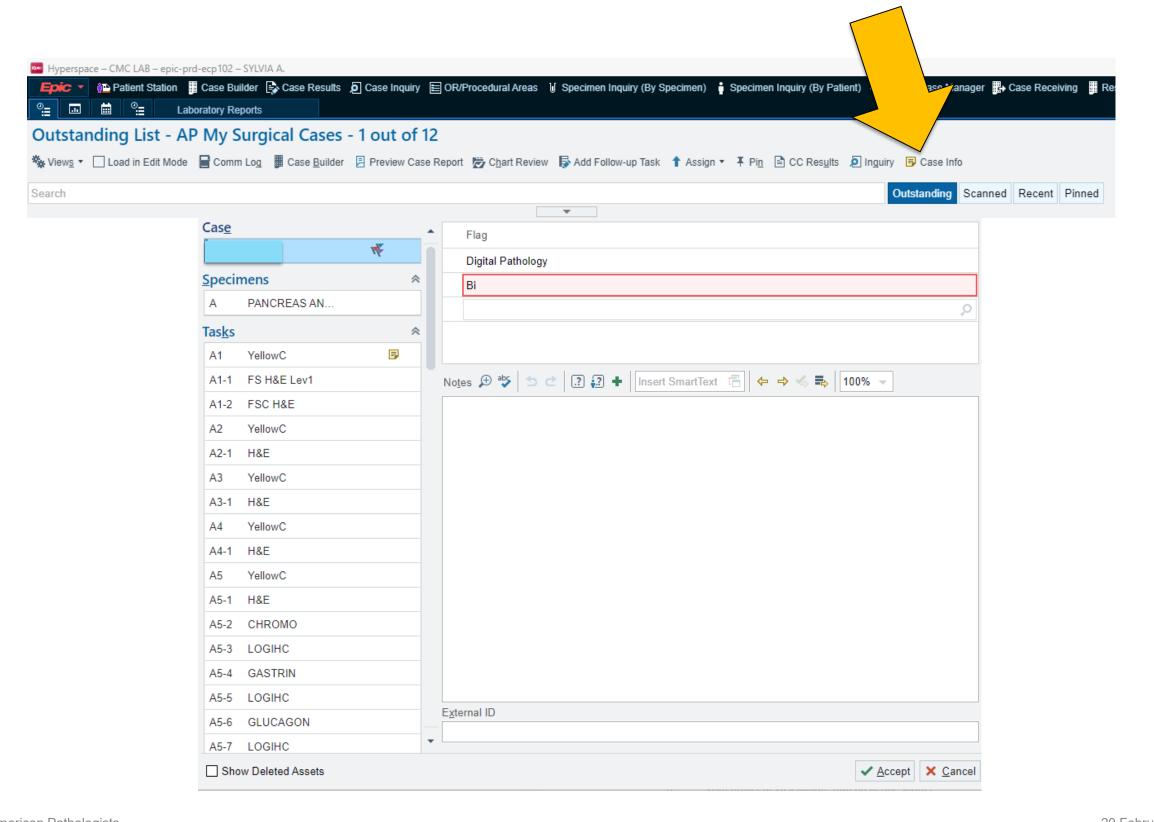


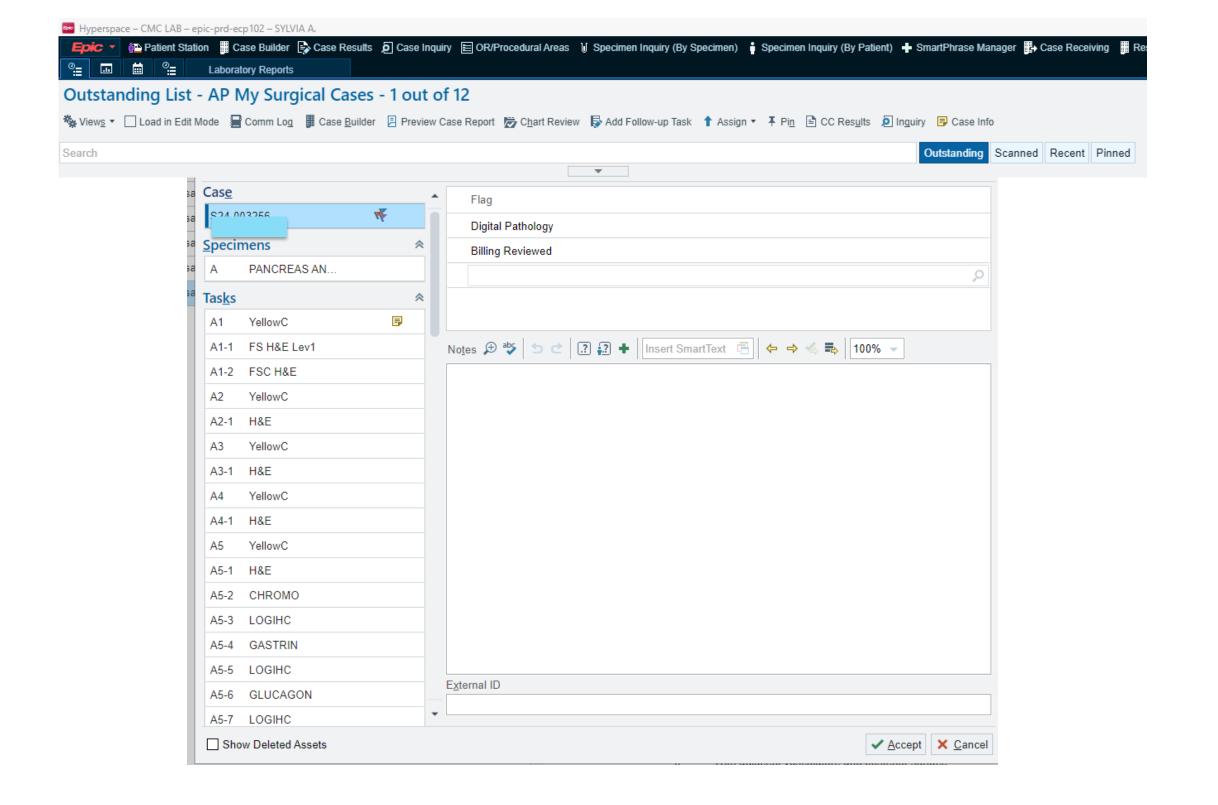
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CPT Coding for Digital Pathology

October 2023 Epic Go-Live

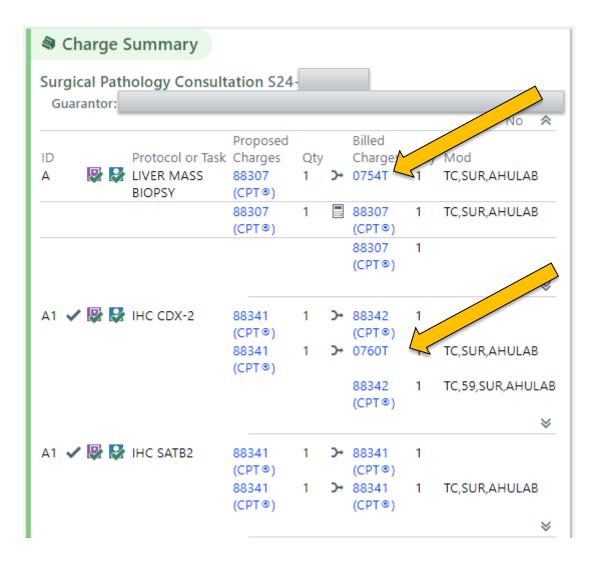






Charg	es		Charges	need revi	ew 🖇
✓ All	Task / Protocol	Charge Code	Туре	Qty	
✓ A	PANCREAS AND SPLEEN	LAB88309	ĦA	1	>
✓ A1	FS H&E	LAB88332	ĦR	1	>
✓ A5	IHC Chromogranin	LAB88341	ĦA	1	>
✓ A5	IHC Gastrin	LAB88341	FI A	1	>
✓ A5	IHC Glucagon	LAB88341	FI A	1	>
✓ A5	IHC Insulin	LAB88341	FI &	1	>
✓ A5	IHC Somatostatin	LAB88341	FI A	1	>
✓ A5	IHC Pancreatic Polypeptide	LAB88341	FI A	1	>
✓ A5	IHC SEROTONIN	LAB88341	FI A	1	>
✓ A5	IHC ATRX	LAB88341	FI A	1	>
✓ A5	IHC KI-67, PROLIFERATING C	LAB88341	FI A	1	>
✓ A8	IHC Insulin	LAB88341	FI A	1	>
✓ A8	IHC Glucagon	LAB88341	FI A	1	>
✓ A8	IHC Somatostatin	LAB88341	FI A	1	>
✓ A8	IHC Pancreatic Polypeptide	LAB88341	FI A	1	>
✓ A8	IHC Chromogranin	LAB88341	FI A	1	>
	Task / Protocol	Charge Code		Qty	

After Signout



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Challenges

- Not everyone remembers to do this
- Bundlers make it complicated
- Billing office seemed to forget that these codes had no dollar value
 - They charged patients the same value as the corresponding professional fee

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Duke Health Experience

Diana Cardona, MD, MBA, FCAP

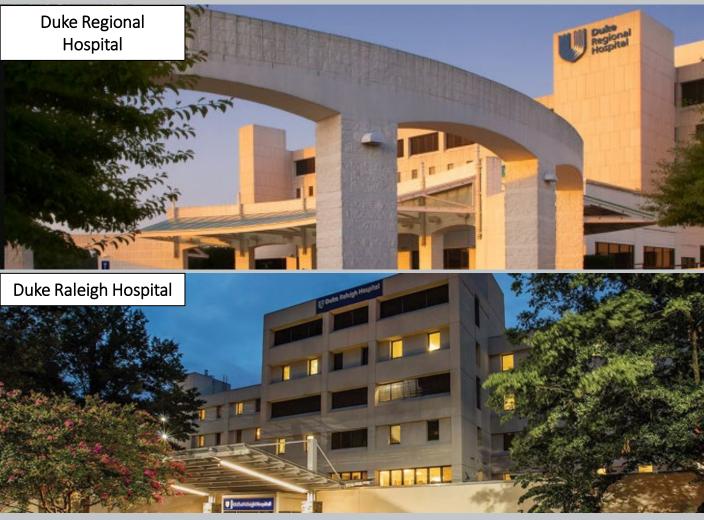
Diana Cardona, MD, MBA, FCAP

Dr. Cardona is Vice Chair and Director of **Duke Health's Anatomic Pathology Laboratories and Associate Medical Director** of Duke Health Clinical Laboratories. Within the CAP, she is a Board of Governor and Vice Chair of the Council on Government and **Professional Affairs. Previously, she served as** the Chair of the Quality and Clinical Data **Registry Committee, the Vice Chair of the CAP's Economic Affairs Committee, and a** member of the Council on Informatics and **Pathology Innovation.**



- Current Digital Pathology
 Infrastructure
- Current Digital Pathology Utilization
- Integrating Digital Pathology Into Our EPIC/Beaker Workflow
- Integrating The Use of Category III
 Digital Pathology CPT Codes
- The Flaws In Our Approach





Digital Scanning Infrastructure

Instruments		Current Use	
GT450 (x3)		Our high throughput scanner - outside cases, referrals, conferences, and STAT cases.	
AT2	Utilizes eSlide Manager Hyperlink	Scanner for tumor biomarkers (e.g. ER/PR/Her2, Ki67) and image analysis.	
CS2		Scanner for frozen section/intraoperative consultations	
Zeiss Axioscan Immunofluorescence (IF) scanner		Scanning of direct IF slides (e.g. medical kidney, muscle and cardiac transplant).	
BioView IF scanner		Scanning of fluorescence in-situ hybridization (FISH) slides for image analysis (e.g MDM2, EWSR1).	
Applied Spectral Imaging Metscan		an Cytogenetics scanner for chromosomal analysis	
Pramana Scanners (x6 clusters)		Scanning Archival Slides	

Digital Pathology Utilization



Clinical Diagnostics:

Weekend and Holiday STAT cases (timely, subspecialty expertise and flexibility).

Predictive/prognostic markers (e.g. ER, PR, HER2, Ki67) for imaging software analysis.

Intraoperative (frozen) consultation slides (e.g. transplant organ procurement).



Send Out Cases:

Retain a copy of original slides being sent out for second/third opinion.



Archival and Conferences:

Scan all outside slides.

Multidisciplinary medical conferences.

Educational conferences (residents, fellows and students).

Nference project - scanning Duke Health's slide archive (goal of 9M slides).



Quality Assurance:

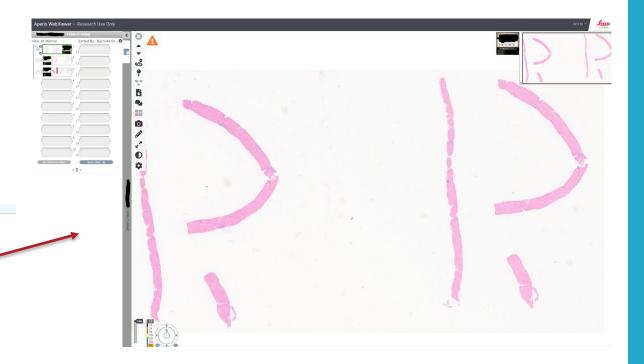
Provides the medical directors timely access to slides for review and problem solving.

EPIC Tracking



Open images for:

BKR ESLIDE MANAGER HYPERDRIVE



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Result Filed To Chart	Surgical Pathology Specimen
Result Prelim Verified	Surgical Pathology Specimen
Result Entered	Surgical Pathology Specimen
Tracked	WSI Complete View tracking acti
Tracked	Histology Complete View tracking
Slide Ordered	A1-10, A1-5, A1-6, A1-7, (2 more

EPIC Digital Code Application

Protocol or Task	Proposed Charges	Qty
Liver Transplant Biopsy	88307 (CPT®) [PR SURG PATH GROSS MICRO LEVEL 5]	1
EBERs CISH	88364 (CPT®) [PR IN SITU HYBRIDIZATION EA ADDL PROBE STAIN]	1 New for 202
C4D	88342 (CPT®) [PR IMHCHEM/IMCYTCHM 1ST SINGLE ANTB STAIN PROCEDURE]	1
Trichrome	88313 (CPT®) [PR SPECIAL STAIN GROUP 2]	1
	0754T (CPT®) [HC DGTZ GLASS MCRSCP SLD LEVEL V SURG PATH] 0757T (CPT®) [HC DGTZ GLASS MCRSCP SLD SPEC STAIN GRP ALL OTH] 0760T (CPT®) [HC DGTZ GLASS MCRSCP SLD IMHCHEM/IMCYTCHM INITIAL STAIN]	1 1

Digital Pathology Category III Codes - 2023

Proc Code	Procedure Name	Count of Proc Code
0752T	HC DGTZ GLASS MCRSCP SLD LEVEL III SURG PATH	24
0753T	HC DGTZ GLASS MCRSCP SLD LEVEL IV SURG PATH	744
0754T	HC DGTZ GLASS MCRSCP SLD LEVEL V SURG PATH	469
0755T	HC DGTZ GLASS MCRSCP SLD LEVEL VI SURG PATH	139
0756T	HC DGTZ GLASS MCRSCP SLD SPEC STAIN GRP I MICROORG	166
0757T	HC DGTZ GLASS MCRSCP SLD SPEC STAIN GRP II ALL OTH	355
0758T	HC DGTZ GLASS MCRSCP SLD SPEC STAIN HCHEM STAIN	7
0759T	HC DGTZ GLASS MCRSCP SLD SPEC STAIN GRP III NZM CONST	7
0760T	HC DGTZ GLASS MCRSCP SLD IMHCHEM/IMCYTCHM INITIAL STAIN	614
0761T	HC DGTZ GLASS MCRSCP SLD IMHCHEM/IMCYTCHM EA ADDL	26
0762T	HC DGTZ GLASS MCRSCP SLD IMHCHEM/IMCYTCHM EA MULT ANTB	63
Grand Total		2614

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The Flaw In Our Method

- The IT build can be labor intensive [heightened with ALL the new 2024 codes!]
- For H&Es the WSI tracking event needs to link the digital code to the protocol cpt, not the task.
- For IHC/SS the WSI tracking event needs to link the digital code to the task cpt, not the protocol.
- Within Duke's Beaker build, there are differences in cytology versus surgical cases and we are now struggling with the codes working consistently
- Process is problematic if there is more than one specimen on a case or more specifically if elements of the case were NOT scanned, ensuring the digital code does not fire.

Work In Progress!



Spectrum Healthcare Partners Experience

Bilal R. Ahmad, MD, MBA, FCAP

Bilal R. Ahmad, MD, MBA, FCAP

Dr. Ahmad is the chair of the Digital Pathology Steering Committee at Spectrum Healthcare Partners and contributing member of the Panel of National Pathology Leaders (PNPL) Digital Pathology and Al Focus Group. He completed his AP/CP residency and hematology fellowship training at Beth Israel Deaconess Medical Center in Boston.



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Company Overview

- Spectrum Healthcare Partners (SHCP):
 - Established in 1996 as a Professional Services Corporation
 - Northern New England's largest multispecialty, physician owned and directed professional organization with more than 200 physicians specializing in Anesthesiology, Radiology, Radiation Oncology, Pathology, and Orthopedics



Company Overview

continued

- Spectrum Healthcare Partners Pathology Division:
 - Comprised of over twenty Board Certified Pathologists:
 - Anatomic Pathology, Clinical Pathology, Cytopathology, Dermatopathology
 - GU Pathology, GYN Pathology, Hematopathology, Neuropathology
 - Pediatric Pathology, Soft Tissue Pathology, Thoracic Pathology, Endocrine Pathology
 - Managed by a Divisional Advisory Committee (i.e., Executive Committee) with a managing director who
 is responsible for the operation of the division
 - Currently providing services to the MaineHealth system, Central Maine Healthcare, Exeter Hospital, and many private practices
 - Partnership with NorDx, Quest, and Sonic for technical services

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Company Overview

continued

Spectrum Management Service Company (SMSC):

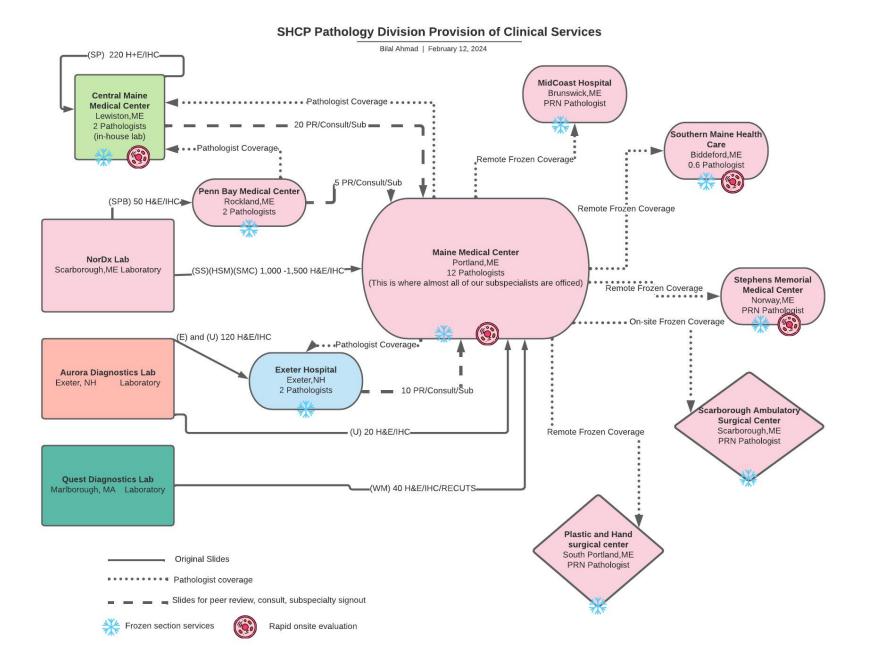
- Credentialing & Medical Staff services
- Executive Management & Practice Leadership
- Financial Strategy & Support
- Human Resources & Employee Development
- Information Technology
- Marketing, Communications & Analytics

- Payor Contracting
- Physician Recruitment
- Quality, Risk & Patient Experience

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- Revenue Cycle /Billing Oversight
- Revenue Integrity Services

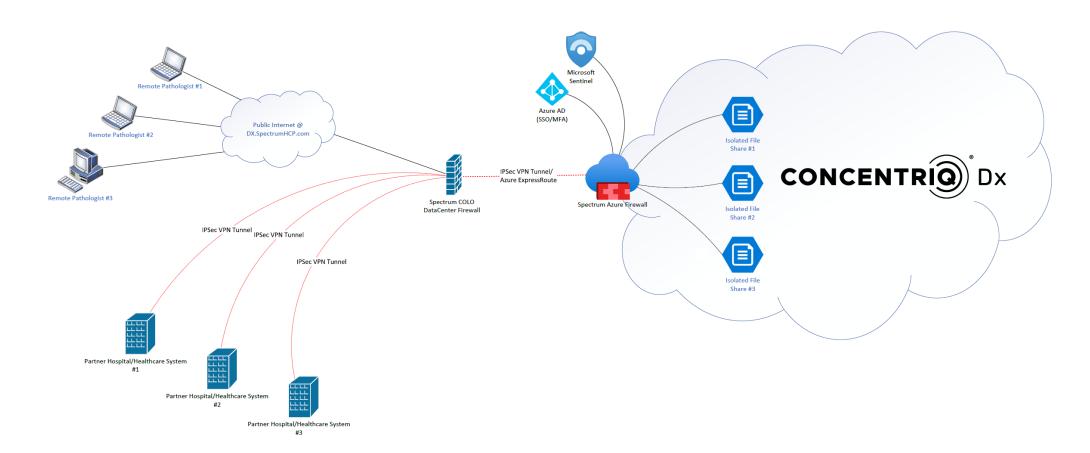
Pathology Provision of Clinical Services



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Digital Pathology Infrastructure and Workflow

WSI for primary diagnostics: H&E, IHC, Specials



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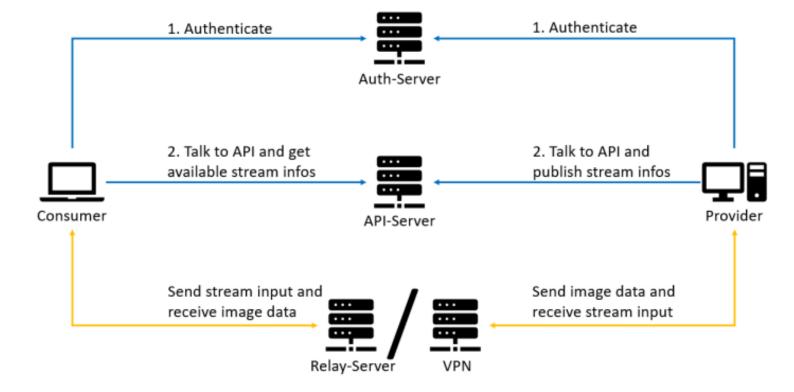
Digital Pathology Infrastructure and Workflow

continued

Live microscopy for frozen section and rapid on site evaluation

Hybrid Setup

Port 443 and 8443, TCP – PreciPoint network High-Port range, UDP – Customer network



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SHCP Pathology Workflows: Billing and Coding

Pathologist Sign out

- Final report dictated and submitted to EHR/LIS
 - o PowerPath, SCC, Cerner, Meditech, Quest, Vue, PathQuest, private systems
 - o EPIC Beaker, June 2024; Cerner upgrade September 2024

File transmission

- EHR/LIS transmits report in hybrid fashion
 - HL7 live feed (shared feed for all SHCP specialty divisions)
 - Flat file for patient demographics
 - Paper reports manually uploaded to shared files
 - BI Reports manually run by staff and uploaded to shared files

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SHCP Pathology Workflows: Billing and Coding

continued

Coding & Billing

- MBMS: billing company for SHCP and most SMSC clients
 - Trained coder applies appropriate ICD and CPT codes
 - EHR validation of patient demographics confirmed as needed
 - Best practice is to share new tests/panels/CPTs to ensure advanced coder education

Reconciliation

- Monthly réconciliations against reports
 - SMSC Coding and Revenue Integrity Team randomly validate coding and investigates any concerns
 - SMSC CFO, SMSC Revenue Cycle Team, SMSC Financial Analyst, and Division Practice
 Directors review monthly charge and payment files MBMS provides.

Category III Digital Pathology: Coding & Billing

- Category III codes for slide digitization were announced in 2023 and 2024
 - https://www.cap.org/advocacy/payments-for-pathology-services/digital-pathology-codes
 - Current state no RVUs or \$ values have been assigned
 - Proliferation of use of Cat III codes likely to influence insurers and lawmakers

Category III Digital Pathology: Coding & Billing

continued

- SHCP has operationalized billing of limited Codes for Frozen Sections performed at Plastic & Hand Surgery associates.
 - SHCP owns scanner and employs the staff that scans the slide
 - Path Assistant notes in the Intraoperative Consultation section of the report:

CLINICAL HISTORY: Basal cell carcinoma

INTRAOPERATIVE CONSULTATION:

FROZEN SECTION DIAGNOSIS:

A. 6:00-9:00 peripheral margin positive. Deep clear. Glass slide(s) were used for digital examination and intraoperative pathologic diagnosis. (2 blocks) Intraoperative read-back performed on 02/02/24. (Michael Jones, MD)

B. BCC present at 9:00. Glass slide(s) were used for digital examination and intraoperative pathologic diagnosis. (1 block) Intraoperative read-back performed on 02/02/24. (Michael Jones, MD)

C. Negative. Glass slide(s) were used for digital examination and intraoperative pathologic diagnosis. (1 block) Intraoperative read-back performed on 02/02/24. (Michael Jones, MD)

(Frozen section performed at Plastic and Hand Surgery Center, Michael A. Jones, MD, Laboratory Director)

A. 88331-26, 0841T; 88332-26, 0842T

B. 88331-26, 0841T

C. 88331-26, 0841T

Digital Pathology Coding: Current and next Steps

- SMSC Payer Contracting informed payers when they would begin to see
 CAT III codes
- MBMS has added all CAT III codes and correlating primary CPTs codes to reporting systems.
 - Cat III codes charged at \$1 each.
- MBMS coders will look in appropriate reporting sections:
 - Final Diagnosis, Intraoperative Consultation, IHC/special stains tables
- SMSC Teams will audit coding and track payer participation.
- Operationalize coding & billing for all Category III codes for WSI at CMHC in Q3/Q4 of 2024

Acknowledgements

- Keary Sibole Practice Director, co-project manager
- Stephen Link Director of IT, co-project manager
- Jason Perry Cloud architect
- Jack Salamone Network engineer
- David Torres Systems engineer
- John Ingram Revenue integrity auditor





Questions

Thank You!

The DCPC will be producing more digital pathology educational content in 2023.

- In addition to webinars the committee will produce podcasts on digital pathology implementation and will create a digital pathology frequently asked questions (FAQ) section for our updated and enriched website.
 - DCPC Website

We are also updating the Digital Pathology Resource Guide. Please reach out if you are interested in assisting with this effort.

To become a DCPC member please apply during the upcoming committee appointment cycle.

