



COLLEGE of AMERICAN
PATHOLOGISTS

Academic Practice Models and Career Planning

Set Yourself Up for a Rewarding Career in Academics

Moderators:

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Diana Lin, MD, FCAP

Panelists:

Michael Laposata, M.D., Ph.D.
Debra G.B. Leonard, M.D., Ph.D.

September 17, 2024

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- **Member, Practice Management Committee, House of Delegates**
- **Professor and Chair of Pathology and Laboratory Medicine at University of Louisville**
- **AP/CP certified with subspecialty fellowships in neuropathology and oncological surgical pathology**
- **Internationally recognized neuropathologist**



Diana M Lin, MD, FCAP

- **Member– Practice Management Committee**
- **Associate Professor of Pathology – University of Alabama at Birmingham**
- **Medical Director, AP Division, UAB Highlands Hospital**
- **CAP State Commissioner for Alabama and Division Commissioner for the Florida Panhandle**
- **Board certified AP/CP and Cytopathology**



Debra G.B. Leonard, M.D., Ph.D.

- **Chair and Professor, Department of Pathology and Laboratory Medicine**
- **Robert Larner, M.D. College of Medicine at the University of Vermont**
- **The University of Vermont Health Network**
- **Burlington, VT**



Michael Laposata, M.D., Ph.D.

- Professor and Chairman,
Department of Pathology, University
of Texas Medical Branch, Galveston,
Texas
- Director of the Diagnostic Center at
UTMB
- Director of the UTMB MDPHD
program



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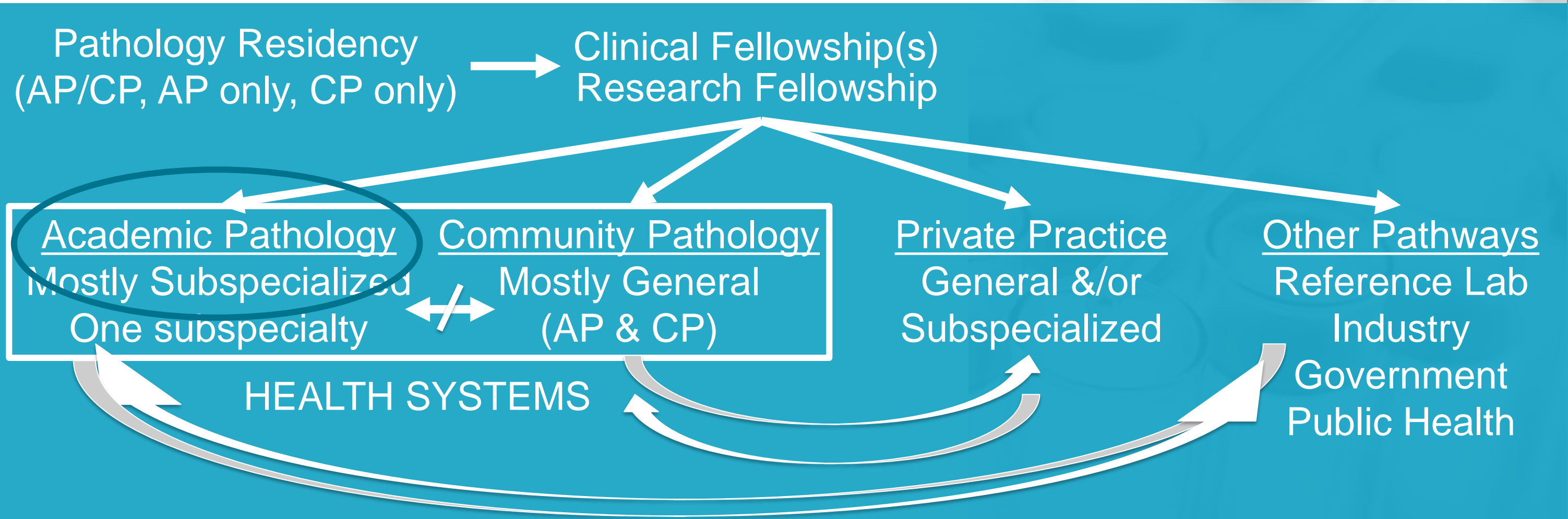
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Succeeding in academic practice, promotion and equity


Dr. Leonard

- Pathology Career Path Options
- The Academic Medicine System
- Success Factors in Academic Pathology
- Creating Equity in Academic Pathology

Pathology Career Path Options



The Academic Medicine System - Overview

- Two Appointments: Faculty & Attending Physician
 - Attending Physician through hospital Medical Staff (no rank)
 - Faculty through medical school & university
 - Track: Tenure, Scholarly Clinical, Clinical, Education, Research
 - Rank: Assistant Professor, Associate Professor, Professor \pm Tenure
 - Leadership: Director, Division Chief, Vice Chair, Chair, Dean, CMO, COO, etc.
 - Different leadership career paths options: Academic or Hospital
- 
- The diagram consists of three curved arrows. One arrow points from the 'Faculty through medical school & university' bullet point to the 'Track' sub-bullet. A second arrow points from the 'Rank' sub-bullet back to the 'Faculty through medical school & university' bullet point. A third, larger arrow points from the 'Rank' sub-bullet to the 'Leadership' bullet point, indicating a transition from faculty rank to leadership roles.

The Academic Medicine System – Promotion & Tenure

- Rules in each academic system are similar with differences
- Tenure may be possible only on the Tenure Track or in all faculty tracks
- Promotion criteria differ by track, for example
 - Tenure: grants, publications, teaching, recognition in field
 - Clinical Scholar: publications, teaching, service activities, recognition in field
 - Clinical: clinical excellence, service, local recognition in field
- Assistant to Associate Professor: Regional to National recognition/presence
- Associate to Professor: National to International recognition/presence

Success Factors in Academic Pathology: Assistant to Associate Professor, Clinical Scholar

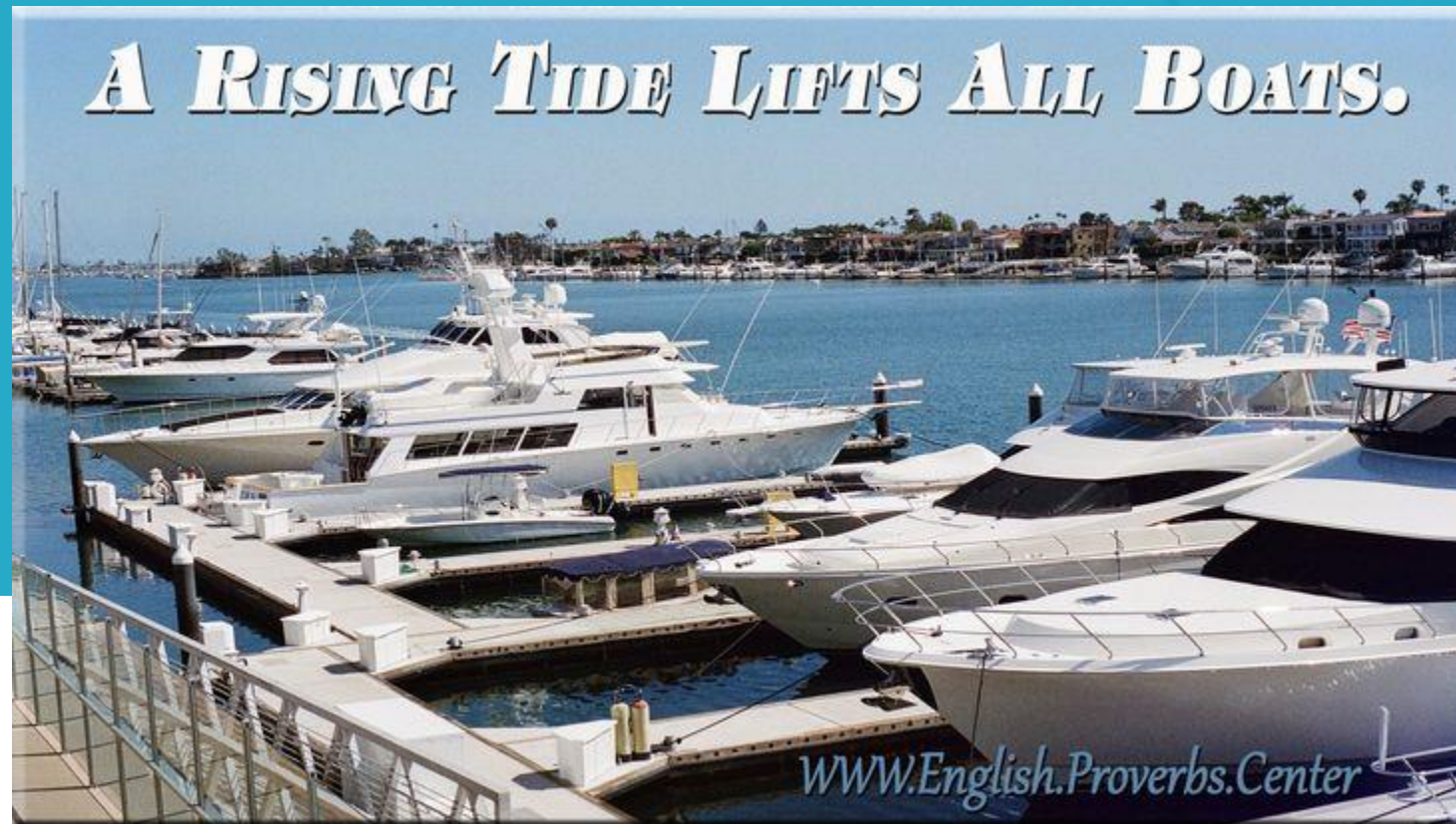
- Take first year to settle into clinical work, pick up teaching & join national committee(s)
- Identify one or more mentors, coaches, sponsors
- Begin to explore smaller leadership roles in areas of your interest
- Publish 1-3 articles per year & give presentations locally to nationally
- Contribute to projects/committees in department, hospital, medical school, university
- Figure out what you love to do and focus on those areas
- Be a good citizen, act professionally, be positive

Success Factors in Academic Pathology: Associate to Full Professor, Clinical Scholar

- Become Vice Chair & Chair of national committee
- Work with your mentors & mentor other faculty
- Consider & seek leadership roles in areas of your interest
- Continue to publish 1-3 articles per year & give talks nationally to internationally
- Contribute to projects/committees in department, hospital, medical school, university
- Continue to do what you love to do
- Continue to be a good citizen, act professionally, be positive, be a problem solver

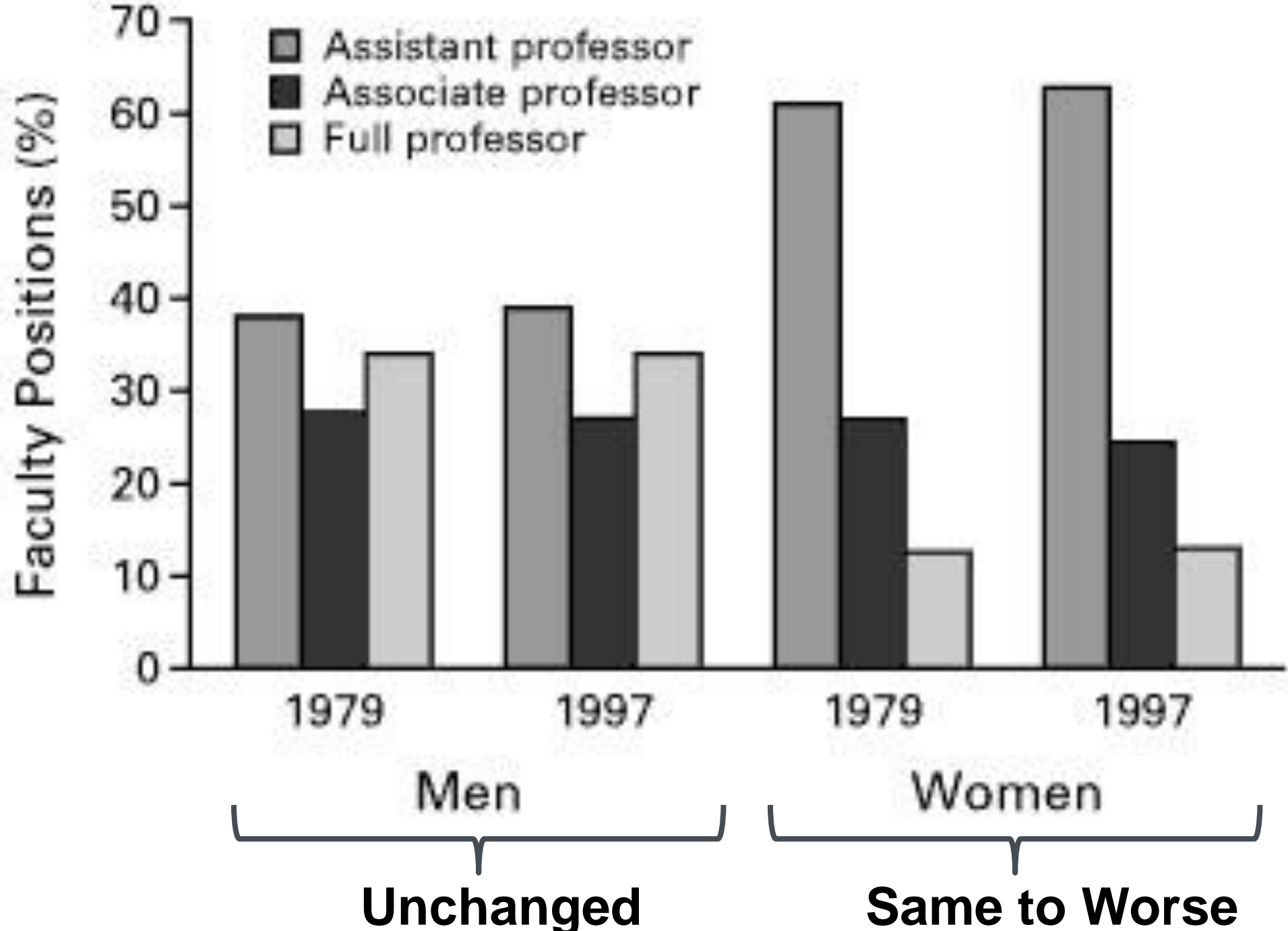
Creating Equity in Academic Pathology

- Gender equity perspective
- What we do to facilitate women faculty's success will benefit all faculty



How are women faculty doing in Academic Medicine?

Distribution of Men & Women in Full-Time Faculty Positions in 1979 and 1997 by Rank



But that was 25 years ago, right?



Women Physicians and Promotion in Academic Medicine

Kimber P. Richter, Ph.D., M.P.H., Lauren Clark, M.S., Jo A. Wick, Ph.D.,
Erica Cruvinel, Ph.D., Dianne Durham, Ph.D., Pamela Shaw, M.D.,
Grace H. Shih, M.D., Christie A. Befort, Ph.D., and Robert D. Simari, M.D.

N Engl J Med **2020**;383:2148-57.

- Expansion of 2000 study, analysis of:
 - Medical school graduates from 1979-2013 (559,098 graduates from 134 U.S medical schools)
 - U.S. medical school faculties from 1979-2018 (following above graduates)
- Overall Conclusion: Over a 35-year period, women physicians in academic medical centers were less likely than men to be promoted to the rank of associate or full professor or to be appointed to department chair, with no apparent narrowing in the gap over time.

**Reasons for & possible solutions to
improve success of women faculty:
Many Studies Done**

What Can We Conclude from the Many Studies?

- By many methods: faculty data analysis, meta-analysis of the literature, interview studies, survey studies of departments, institutions & national data
- Women faculty experience bias, barriers, an unsupportive leadership, culture & policies, salary inequities, lack of understanding for personal obligations, inadequate mentoring, lack of role models, and other barriers to academic success
- Some suggested solutions include mentoring, sponsorship, policy changes, training to reduce gender bias, culture change, salary equity, etc.
- No data on success of interventions improving women faculty promotion rates

My Approach: Chair Transparency & Equity Builds Faculty Trust & Engagement

- Salary equity & transparency
- Internal leadership role searches rather than appointments
- Support whatever family leave faculty can arrange through HR
- Allowing part-time effort at high family need times
- Communications through faculty meetings, town halls, office hours, etc.
- Individual meetings to understand & support passions of faculty
- Seeing everyone as a potential leader & supporting development

Our New Roles in Academic Pathology in 2024

Michael Laposata, M.D. Ph.D.

Professor and Chair

Department of Pathology

University of Texas Medical Branch Galveston

Disclosures

Director of John Sealy Diagnostic Center at UTMB

Scientific Advisory Board For Werfen

Founding member of Expert Diagnostic Colleague

2014 - 2015

The largest contributor to preventable death from medical error is

Diagnostic Error

**as reported by a committee sponsored by the National Academy of
Medicine**

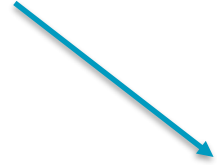
Wrong Diagnosis



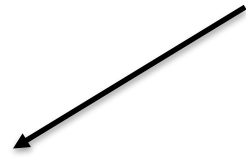
Ineffective Treatment



**Improved Despite
Incorrect Treatment**



**Illness
Progressed**




**Major Cause of Chronic Disease
and Preventable Death**

**Just to show you how little everyone knows about
this.....**

**Why is there no urgency when it is documented
by the National Academy of Medicine that there
are more than 60,000 preventable deaths in the
US annually,**

Far more than all the mass shootings combined?

Burden of serious harms from diagnostic error in the USA

David E Newman-Toker ^{1,2} Najlla Nassery,³ Adam C Schaffer,^{4,5} Chihwen Winnie Yu-Moe,⁵ Gwendolyn D Clemens,⁶ Zheyu Wang,^{6,7} Yuxin Zhu,^{1,6} Ali S. Saber Tehrani,¹ Mehdi Fanai,¹ Ahmed Hassoon,^{1,2} Dana Siegal^{8,9}

“Across clinical settings (ambulatory clinics, emergency department and inpatient), we estimate that nearly **800 000** Americans die or are permanently disabled by diagnostic error each year, making it the single largest source of serious harms from medical mistakes.”

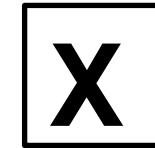
BMJ Quality & Safety 2023; 33 82-85
Published Online First: 04 Oct 2023.
doi: 10.1136/bmjqs-2023-016496

**Where are the Patients
in the Scenario?**

**Do They Know
there is a Problem?**

ICD-10 Coding System Cannot Capture Medical Errors

Myocardial infarction



Stroke



Cancer



Diabetes



**Myocardial infarction thought
to be anxiety 3 days earlier**



Patients Do Not Know:

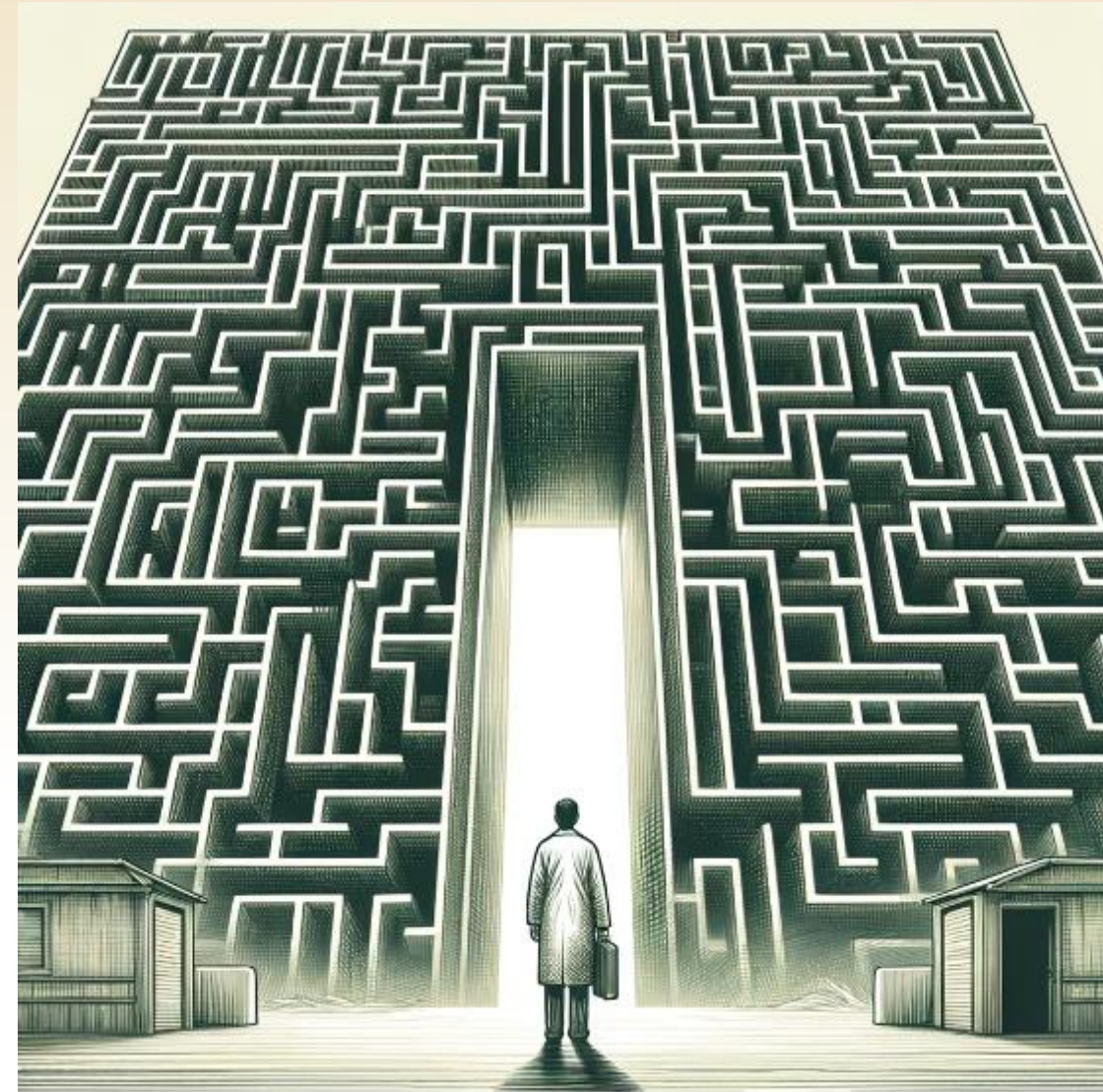
The evidence for these conclusions is that 1 in 5 Americans believe they have been a victim of a diagnostic error.

In fact, virtually every adult in the US has been a victim of at least one diagnostic error

**What is needed from us
by our colleagues in
healthcare and the
patients?**

How Can a Patient Facing Healthcare Provider Know Enough?

- They are ordering the right non-routine tests?
- They are making the most up-to-date interpretation of the test results for the patient in their current state?

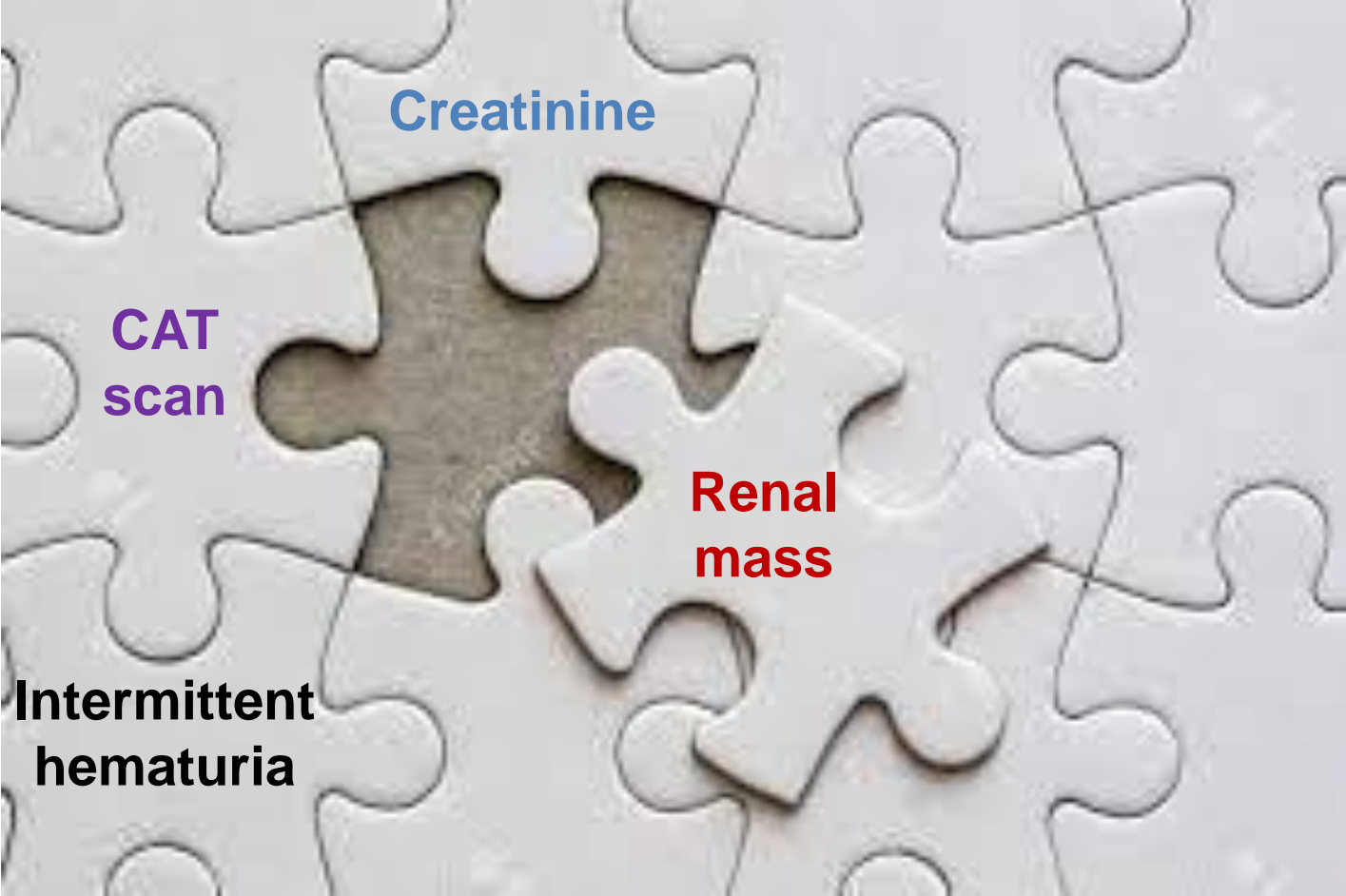


Pathology Needs to Have Experts in All Diagnostic Fields

- **Up-to-date interpretation**
- **Patient-specific**
- **Automated for fast delivery**
- **Actionable next step recommendations**



Integrative Diagnostics Must Be Implemented – There are Major Barriers to This Challenge



- History and physical exam
- Clinical pathology with genetics
- Anatomic pathology
- Radiology

Evaluation for Thrombotic Risk to Identify All Contributors to a Thrombotic Event

Radiology, Clinical Pathology, and Anatomic Pathology Experts All Contribute

Urine is positive for hemoglobin

Creatinine elevated and eGFR is low

Imaging of kidney consistent with mass

Biopsy of mass indicates renal cell carcinoma

Second hit for current thrombosis is malignancy

Nephrectomy can remove thrombotic risk factor

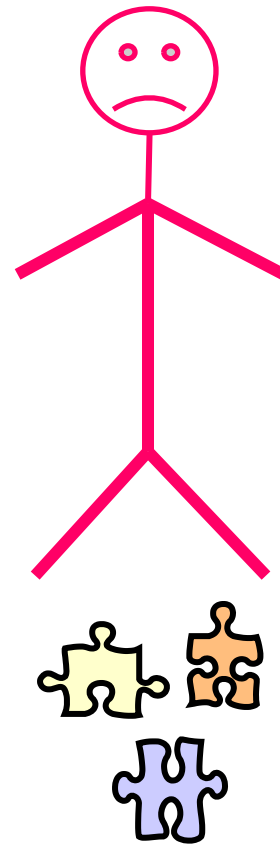
Prophylactic dosing of anticoagulant after nephrectomy

**It is the pathologists who
must put the diagnostic
puzzle pieces together –**

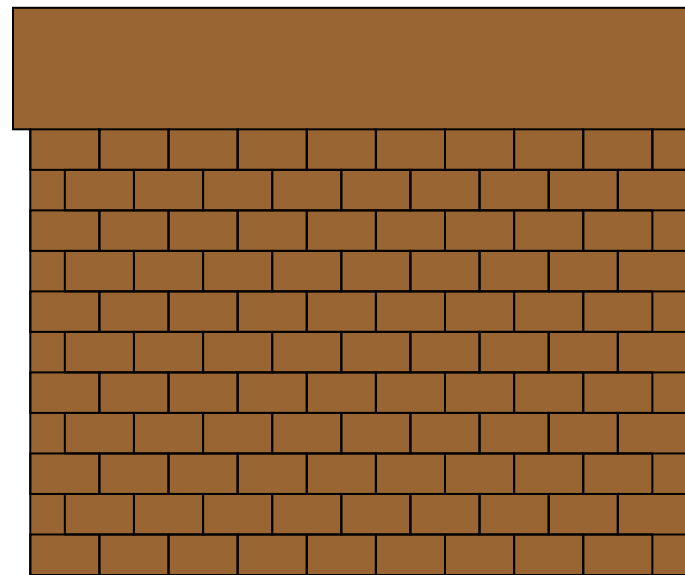
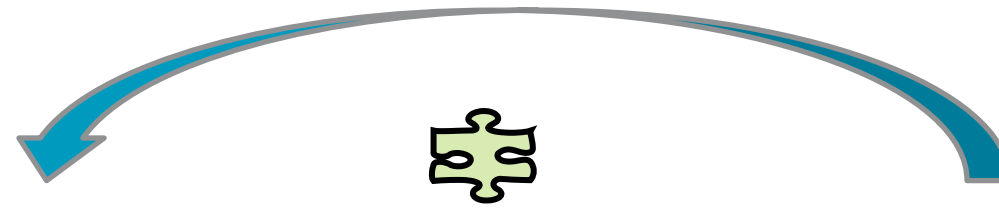
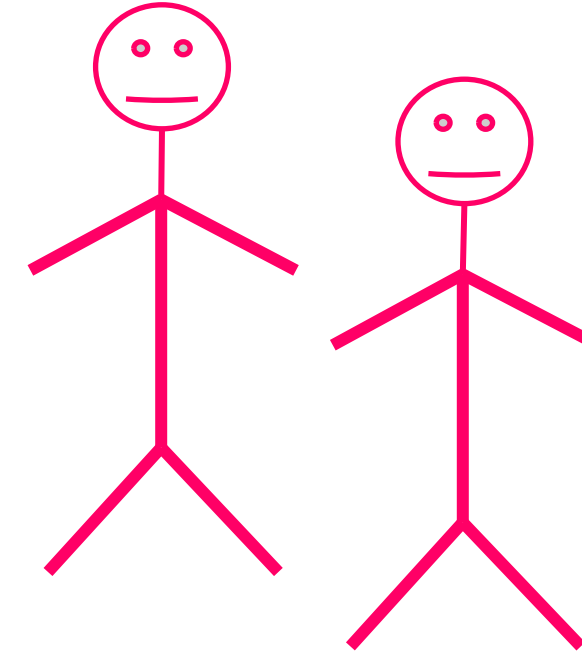
**Because they can
understand their clinical
significance better than any
other doctor**

Passive Laboratory-Virtually every clinical lab in the United States TODAY

Ordering Doctors



Diagnostic Doctors



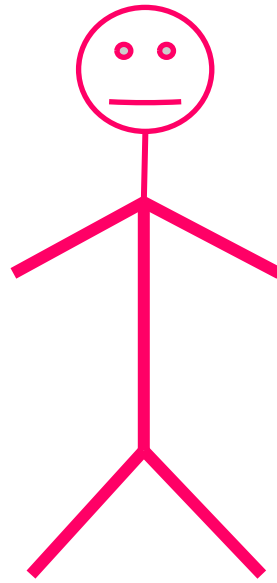
Isolated Diagnostic Bits of Data -

Assembly by Ordering Physician

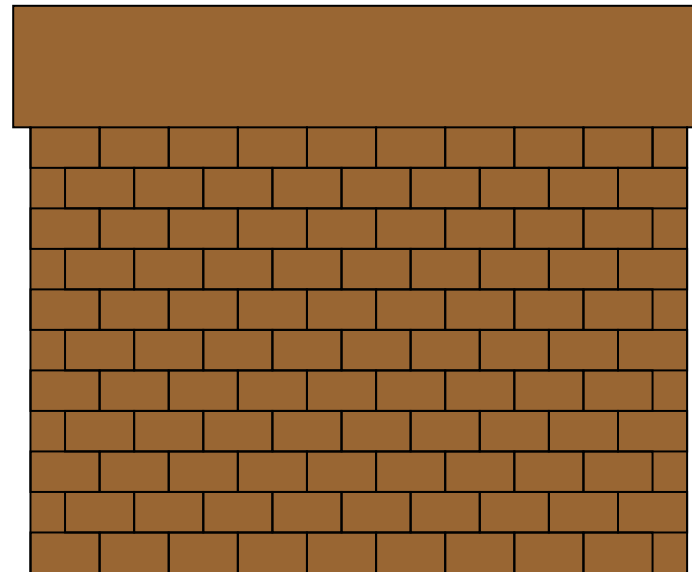
Minimally Trained in Test Selection and Interpretation

Until recently there was minimal payment for picking up the pieces and establishing a diagnosis

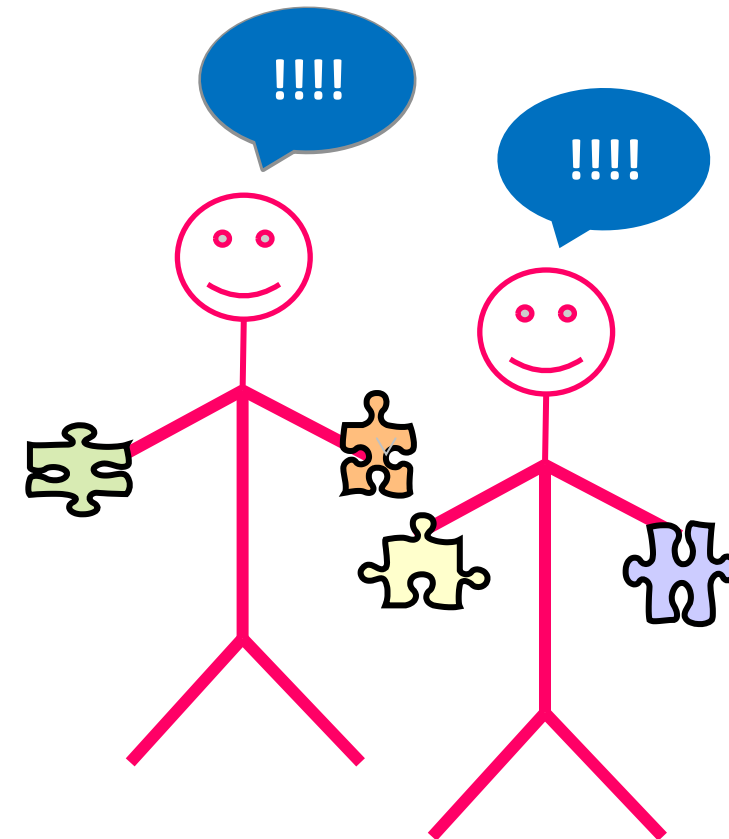
Ordering Doctors



Caring for More Patients While Diagnostic Puzzle is Being Assembled



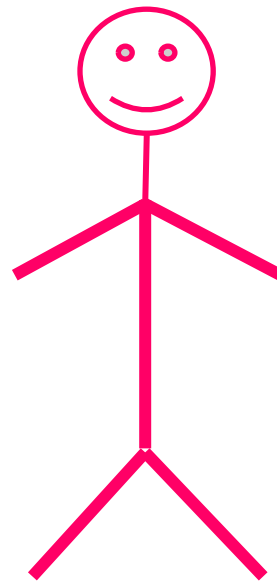
Conferring Diagnostic Doctors



Isolated Diagnostic Bits of Data Being Merged with Clinical Data about the Patient by the Diagnostic Doctors

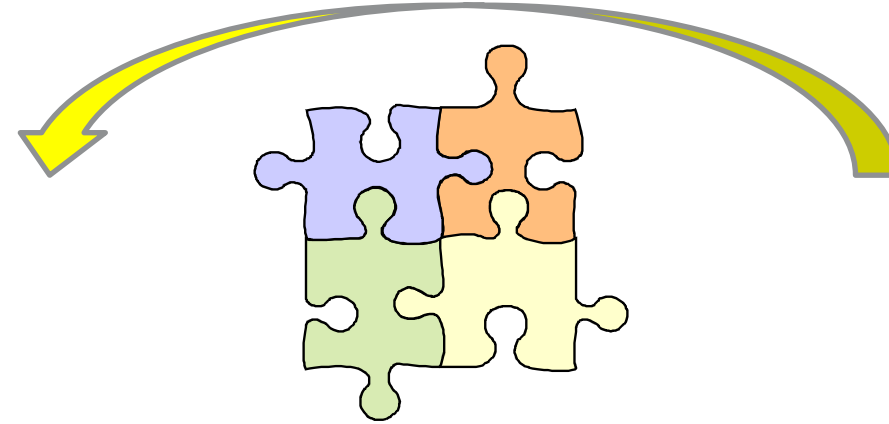
Pathology Laboratories – Active in Test Selection and Result Interpretation for the Majority of Patients

**Ordering
Doctors**



**Receives Accurate
Diagnosis Quickly
as a Completed Puzzle**

Solved Diagnostic Puzzle



*There Is No Wall
between the Ordering Doctors
and the Diagnostic Doctors*

**Conferring
Diagnostic Doctors**



Nearly 30 Years Passed Before the Technical Capabilities Arose to Permit Widespread Interpretation of All Diagnostic Results by Experts in Large Numbers

- Vectorization to allow searching of Epic and match it with one of many written comments
- Artificial intelligence using generative language models to assemble correct content of interpretive comments
- Vector Based Searching to create continuous review of all published literature related to a set of narrative interpretations

10 laboratory interpretations/day prepared manually



500 interpretations/day prepared with new technology in the same amount of time



What Does This Mean for Traditional Anatomic Pathology?



Compound Microscope **virtually unchanged since 1830**

Paper medical record. Easy to lose. Hard to search

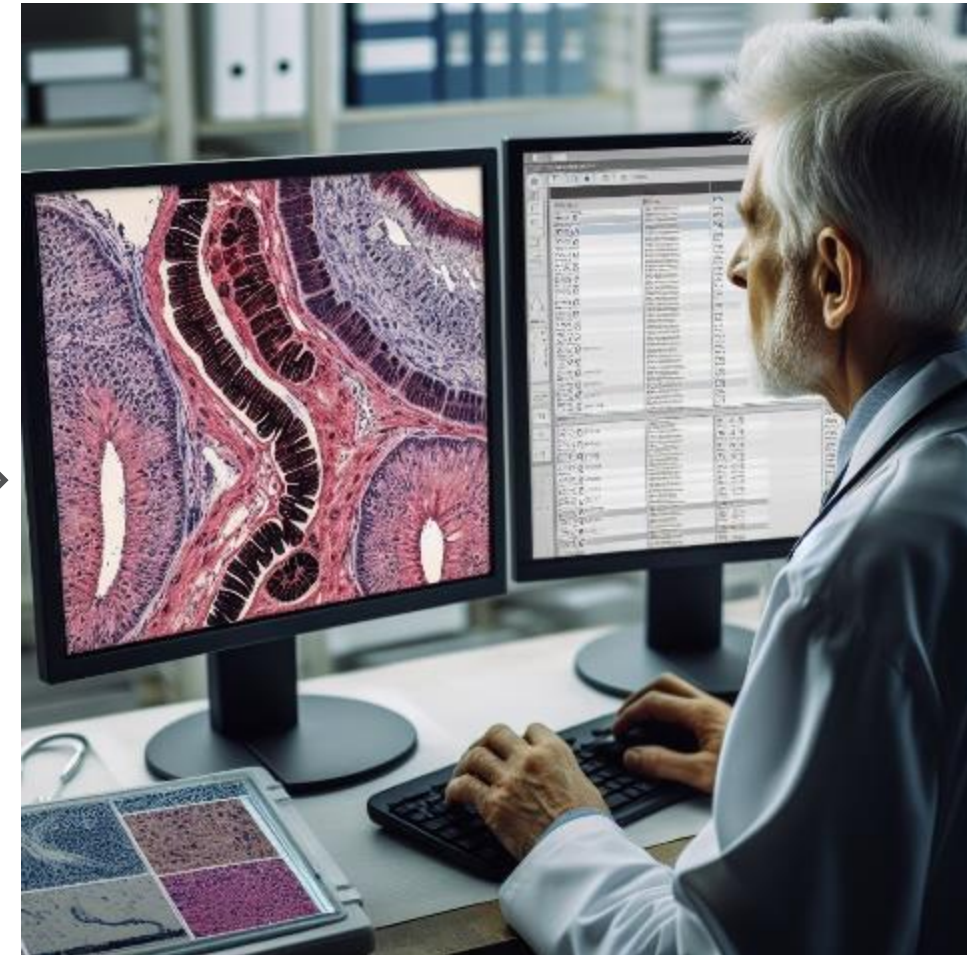
Glass slide. Easy to break. Hard to transport.

Pathologist Report. Subjective. Error prone.

Digital Transformation of Anatomic Pathology



Most other Pathology departments in 2024



**UTMB Pathology from 2021 onwards
One of the first all-digital departments in the USA**

Pathologists Working with AI Algorithm get the Best Results

Metric	Pathologist	AI Algorithm	Pathologist with AI
Sensitivity	93%	93%	100%
Specificity	95%	99%	100%
Positive Predictive Value	89%	99%	100%
Negative Predictive Value	97%	97%	100%

**Pathologists make mistakes, AI makes mistakes.
Together they get it right.**

An empty cockpit? An instrument deciding if your biopsy is malignant?



**Even if there is a computer system to fly an airplane,
it will never be without a pilot**

The same is true for a pathologist and a biopsy

**THE CONSEQUENCES OF A MISTAKE ARE TOO
ENORMOUS**

**How can pathologists
become the most
indispensable doctors to
optimize patient outcome
and fiscal responsibility?**

**We Need to Contribute
More Than Just a Test Result
and not expect another
healthcare provider to take
all the diagnostic
information and reach a
conclusion – for all except
the most simple diagnoses**

**With Diagnostic Expertise From
Us, Fewer Diagnoses are
Delayed or Missed, and, as a
Result . . .**

Fewer Preventable Deaths

**Fewer Patients with Preventable
Chronic Disease**

**Let us change the way
many pathologists think
about the challenges and
opportunities**

What Will Surely Happen if Done Well

**Dramatic Increases in the Number of
Accurate Diagnoses Will Occur Within a
Much Shorter Timeframe of the Patient's
Illness**

**Rapid and Accurate Diagnosis will
Significantly Reduce the Number of
Patients Who Would Otherwise Develop
Painful and Expensive Chronic Disease**

**The Door is Formally and Publicly
Opened for Pathologists to
Participate**

and to Lead

**A Team of Providers in Partnership
with Radiologists Who Provide an
Accurate Diagnosis Rapidly**

**We Must be Ready for the
Moment When Millions of
Patients Realize that
Their Complex Diagnosis
Could Have Been Made
with Less Suffering and
Less Cost**

Questions?

Membership

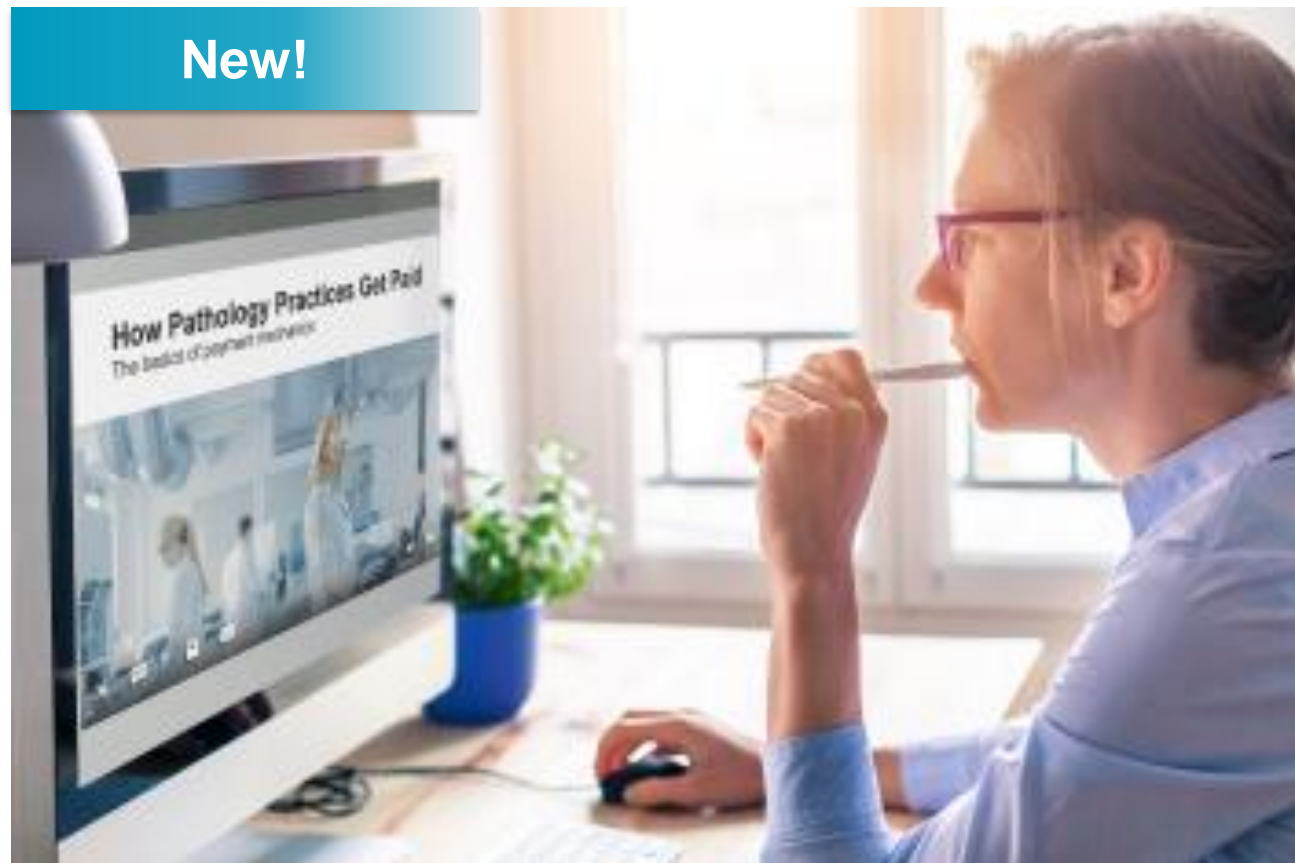
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Pathology Business Fundamentals

Essential online courses to help grow your management skills to lead your practice



1. Relative Value Units (RVU's)—Understanding the Basics
2. How Pathology Practices Get Paid
3. Revenue Cycle Management
4. Analysis and Interpretation of Billing Reports
5. Basic Practice Cost Analysis
6. Capacity Management and Workflow Analysis
7. Basic Contracting and Fee Analysis
8. Basic Budget Development

Learn more
and register



Additional Resources

- **Practice Management Webpage**
 - <https://www.cap.org/member-resources/practice-management>
- **Previous and Upcoming Roundtables/Webinars**
 - <https://www.cap.org/calendar/webinars/listing/practice-management-webinar>
- **Articles Authored by Members of the CAP Practice Management Committee**
 - <https://www.cap.org/member-resources/articles/category/practice-management>
- **Practice Management Networking Community**
 - <https://www.cap.org/member-resources/practice-management/practice-management-networking-community-application>
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 - <https://www.cap.org/member-resources/practice-management/frequently-asked-questions>



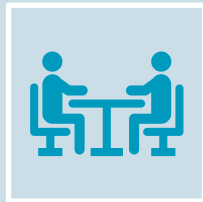
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If after attending this discussion and later you applied any of what you learned to your practice, please share your feedback of how it worked for your practice at <https://www.cap.org/member-resources/practice-management/practice-management-inquiry-form> .



Watch for the session evaluation form. Your feedback is important!



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