Virginia Rural Health Association

June 2, 2026
Staunton, VA

AI | The New Landscape

Improve Systems | Increase Safety | Decrease Errors

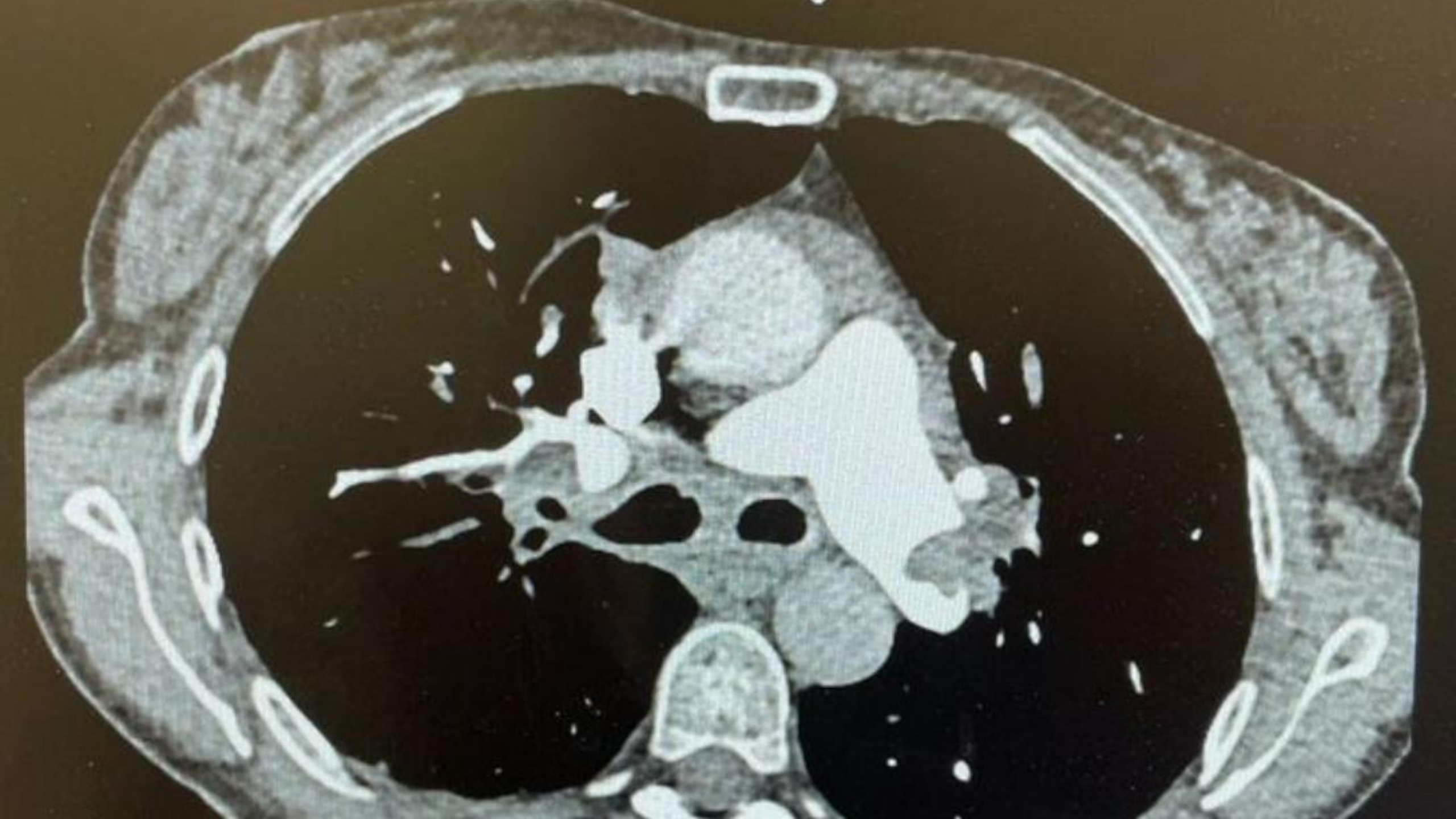
Virgina Rural Health Association
Critical Access Hospital Summit| 2026
Staunton, VA
Tuesday | June 2, 2026, | 09:00

Kayur V. Patel, MD, MRO, FACP, FACPE, FACHE, FACEP

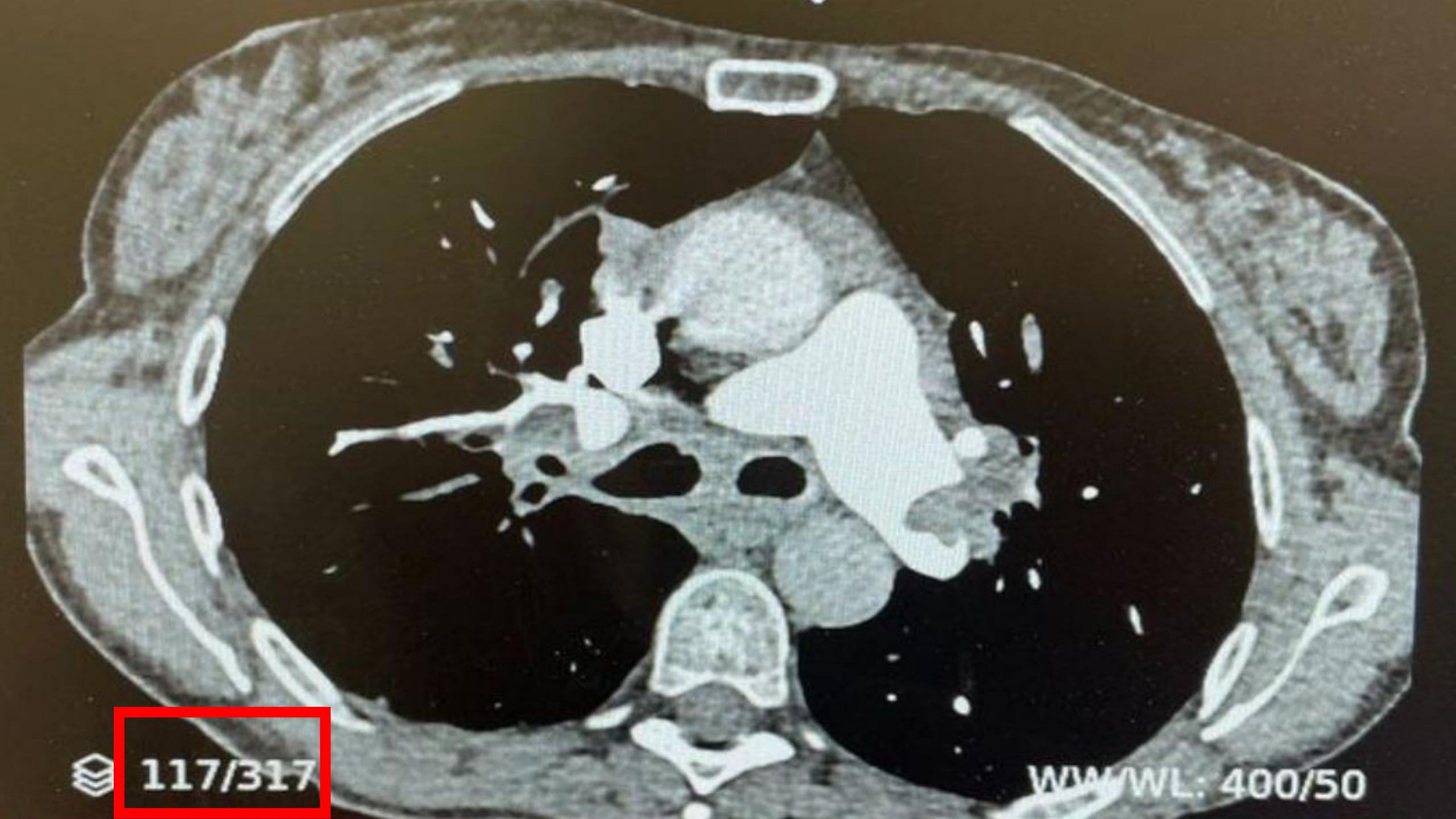
Customized | Tailored | Care

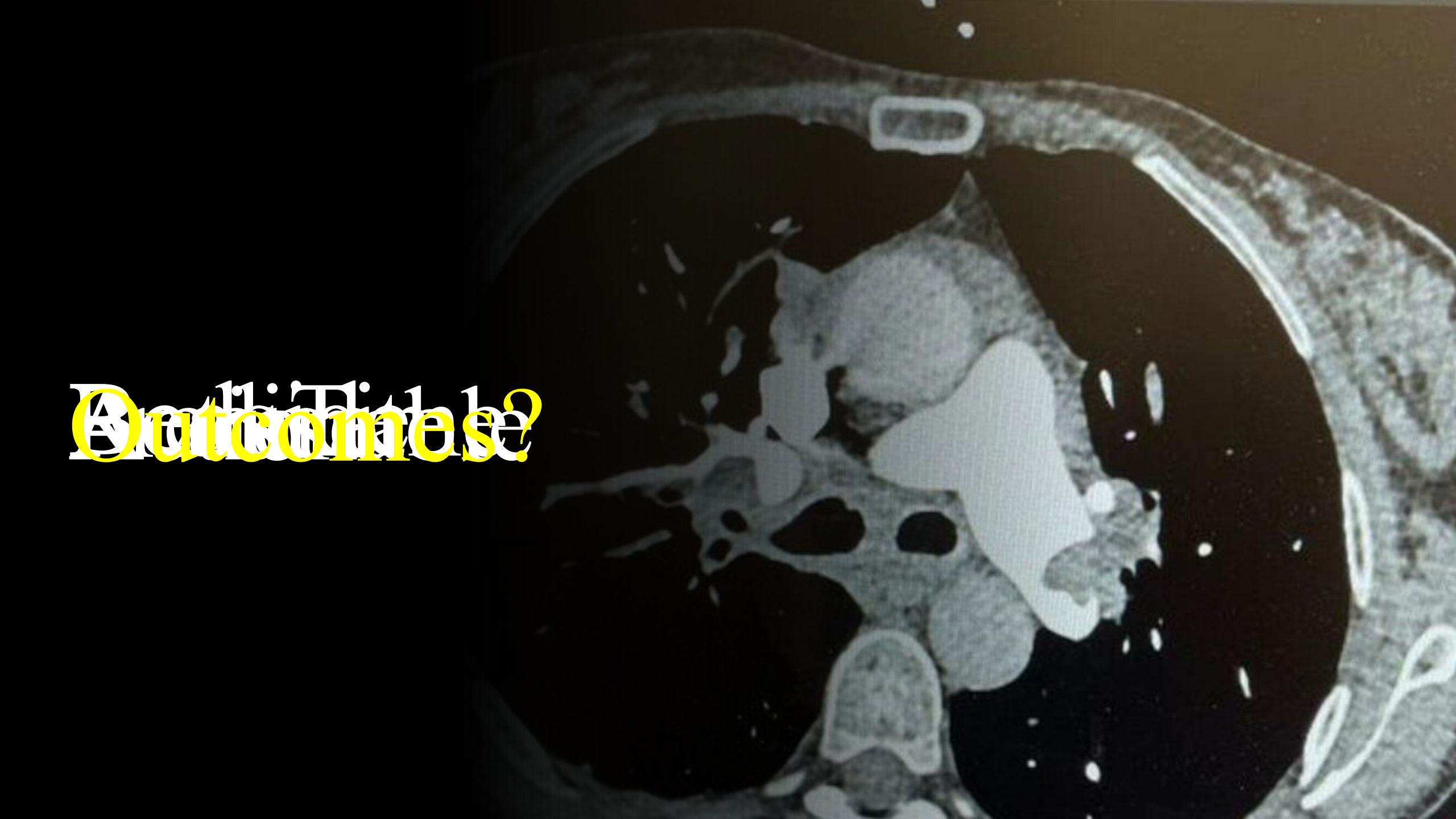

HOSPITAL
HOSPITAL


61-year-old | SOB



Suspected PE


117/317
WW/WL: 400/50


Outcomes?


86


Augmented Intelligence
Cost


lass General Brigham


System Safety

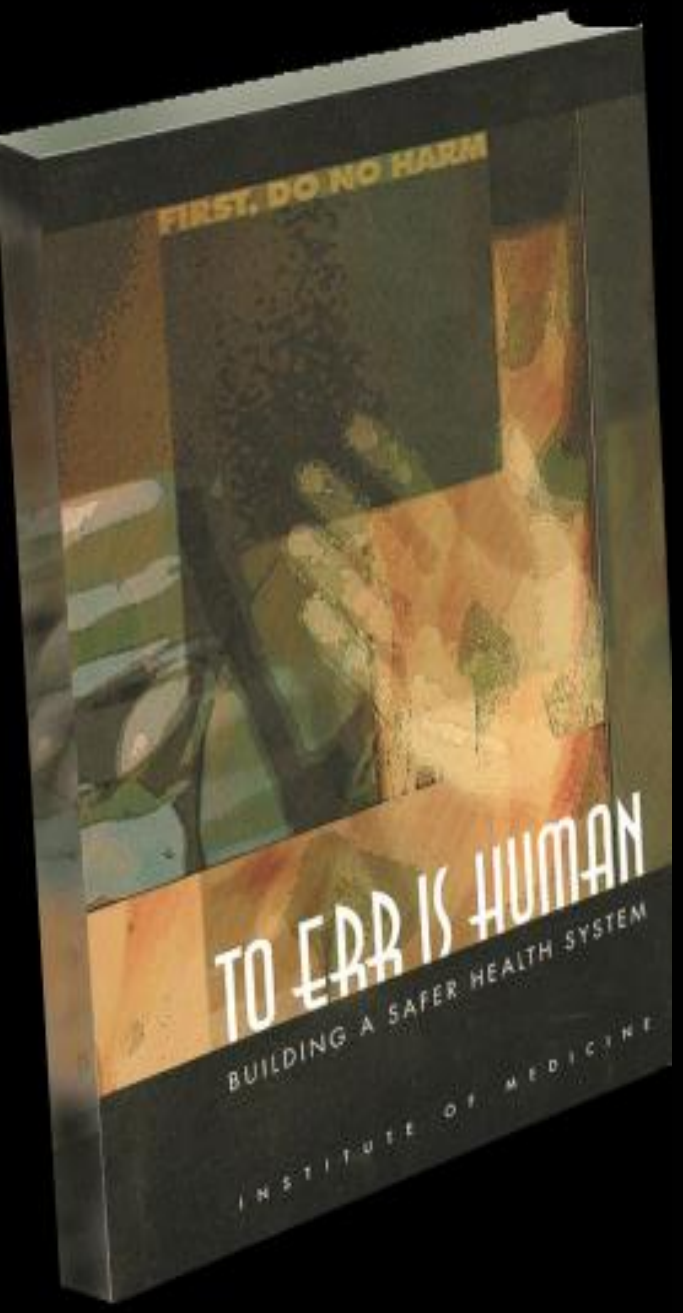

SECOND EDITION
TOYOT
HEALT
EXCEL
Increase Eff
Improve Q
LE
JOHN
with DAVID MILLER
High-Re
HEALT
IMPRO
PATIENT
OUTC
SIX S
SECOND
Robert Barry
MANAGI
UNEXP
THIRD E
Sustained Perf
Complex
KARL E.
KATHLEEN M
MATTHEW
Author of BOU
Black
Think
WHY MOST PEOPL
LEARN FROM
MISTAKES—BUT
READ BY SIMON
UNABRIDGE
JEFFREY "LENO" KUHLMAN, MD, MPH
ROBERT "NAVY BOB"
HIG
RELIAB
HEALTH
APPLYING THE
OF THE NUCLEA
SAVE PATIEN
StuderGroup
Malcolm Baldrige
The
HCAH
Handb
Hardwire Your Ho
Pay-for-Performan
By
Quint Stude
Brian C. Robinson & Kar
High Reliability
Organizations
HRO
A Healthcare Handbook
for Patient Safety & Quality
Cynthia A. Oster | Jane S. Braaten
Foreword by Jane Barnsteiner


Safety
Culture

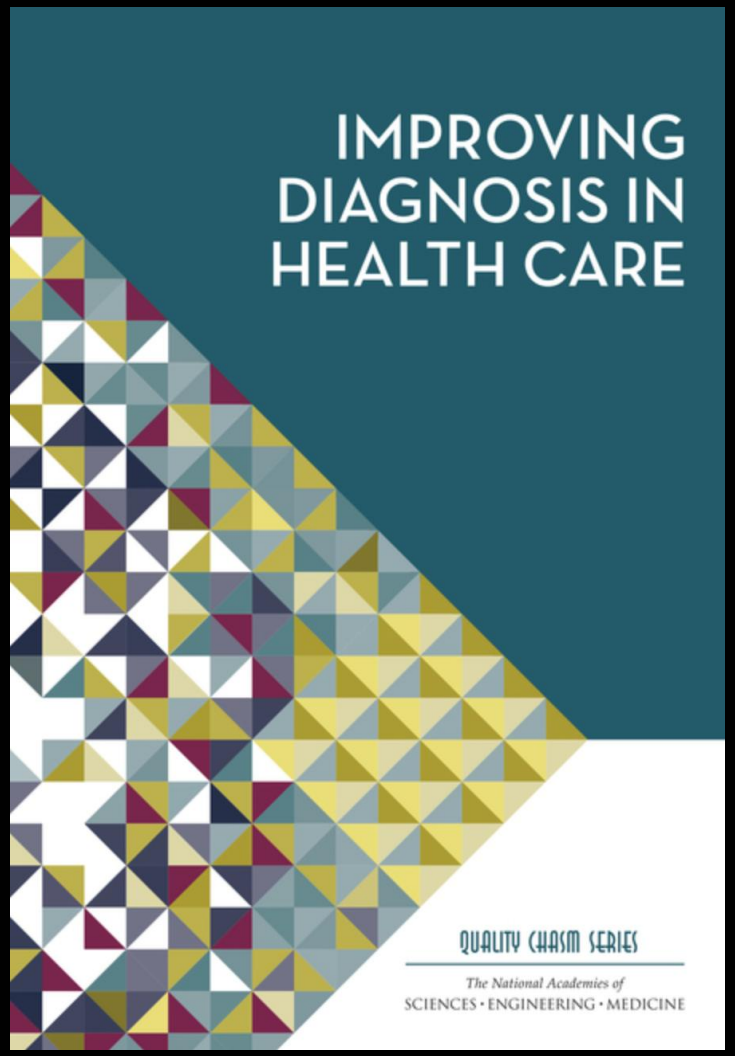

Medical Errors

T-1

Insert Clip Here | Night Prior



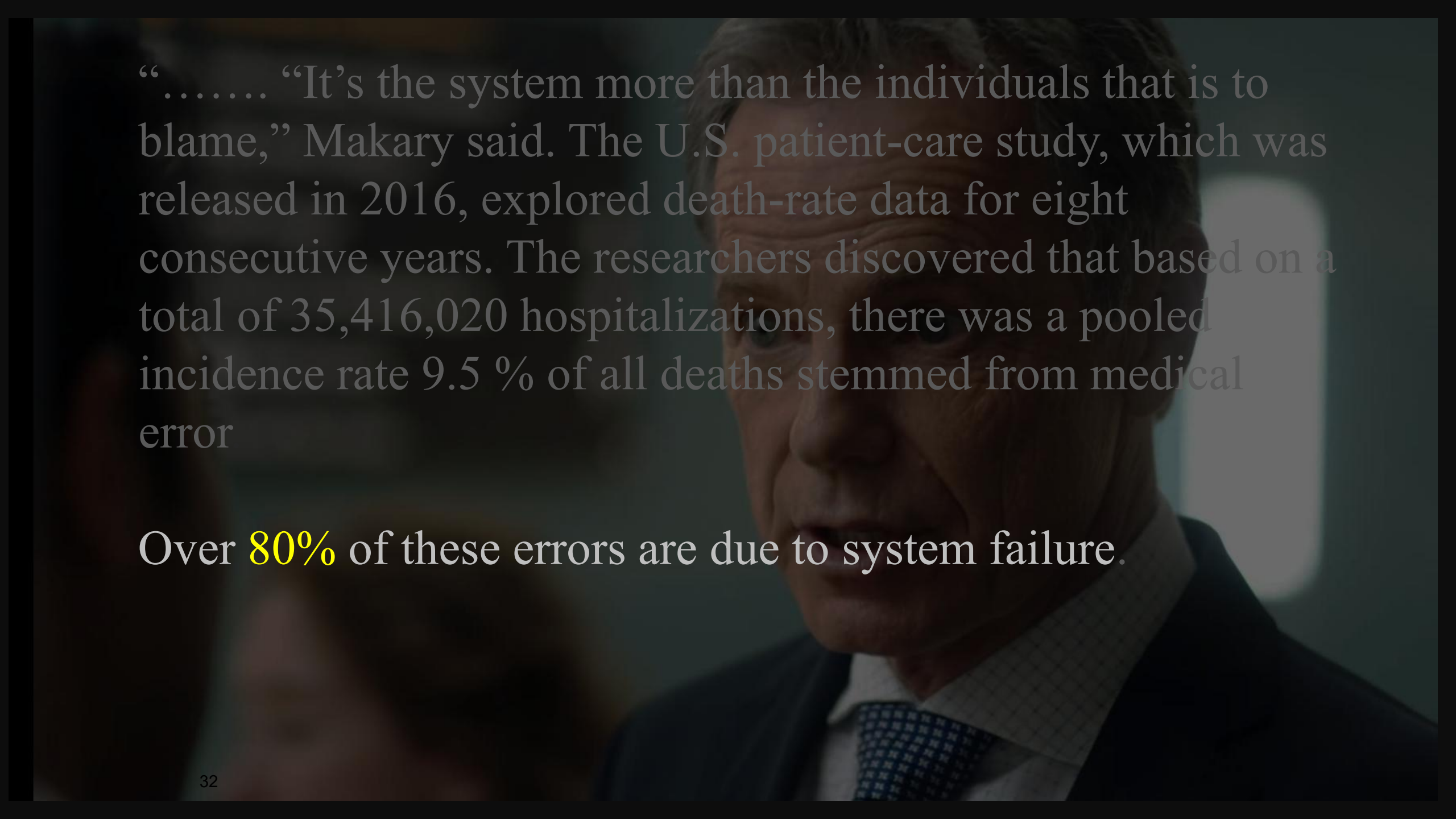
"....*To Err Is Human* asserts that the ***problem is not bad people in health care rather it is that good people are working in bad systems*** that need to be made safer. A realization that most errors are out of the clinician's control. Hospitals are obligated to facilitate, identify and establish root cause analysis of healthcare related errors. Disclosure of medical errors is considered an ethical duty and is required by JCAHO. Institutions must make sure that patients harmed by adverse events do not face additional financial burdens; conduct a root cause analysis; and develop an action plan if necessary. If an actual error transpired, the appropriate institutional representative should apologize to the patient. Institutions should also adopt policies that encourage smooth transitions to new technologies, and foster communication as the key to improving patient safety. Despite all efforts current study from John Hopkins revealed number of healthcare related errors have not changed from first reported in 1999 by Institute of Medicine (IOM). This accounts for our third leading cause of death in the US..



"Getting the right diagnosis is a key aspect of health care - it provides an explanation of a patient's health problem and informs subsequent health care decisions. The diagnostic process is a complex, collaborative activity that involves clinical reasoning and information gathering to determine a patient's health problem. According to Improving Diagnosis in Health Care, diagnostic errors-inaccurate or delayed diagnoses-persist throughout all settings of care and continue to harm an unacceptable number of patients. *It is likely that most people will experience at least one diagnostic error in their lifetime*, sometimes with devastating consequences. Diagnostic errors may cause harm to patients by preventing or delaying appropriate treatment, providing unnecessary or harmful treatment, or resulting in psychological or financial repercussions. The committee concluded that improving the diagnostic process is not only possible, but also represents a moral, professional, and public health imperative."…National Academy of Medicine, 2015

"……. "It's the system more than the individuals that is to blame," Makary said. The U.S. patient-care study, which was released in 2016, explored death-rate data for eight consecutive years. The researchers discovered that based on a total of *35,416,020* hospitalizations, there was a pooled incidence rate *9.5 %* of all deaths stemmed from medical error.

2016 | John Hopkins | https://www.hopkinsmedicine.org/news/media/releases/study_suggests_medical_errors_now_third_leading_cause_of_death_in_the_us



"……. "It's the system more than the individuals that is to blame," Makary said. The U.S. patient-care study, which was released in 2016, explored death-rate data for eight consecutive years. The researchers discovered that based on a total of 35,416,020 hospitalizations, there was a pooled incidence rate 9.5 % of all deaths stemmed from medical error

Over 80% of these errors are due to system failure.

T-1

Insert Clip Here | Night Prior

Maternal Mortality

US is the most dangerous place to give birth among developed countries

“…It’s the system more than the individuals that is to blame,” Makary said. The U.S. patient-care study, which was released in 2016, explored death-rate data for eight consecutive years. The researchers discovered that based on a total of…

CNBC – Feb 2018, The third-leading cause of death in US most doctors don’t want you to know - CNBC


Precision | Accuracy

Hardwiring with AI

Improve Systems | Increase Safety | Decrease Errors


Safety
Culture

Trust Board Meeting

Agenda PART A (in public)

Date: Thursday 6 June 2013 at 1:30 pm.

Venue: Board Room,

Members of the public are welcome to attend so as to observe the meeting. Questions about any aspects of the running of Trust are welcome and should be addressed to the Chair at the end of the meeting

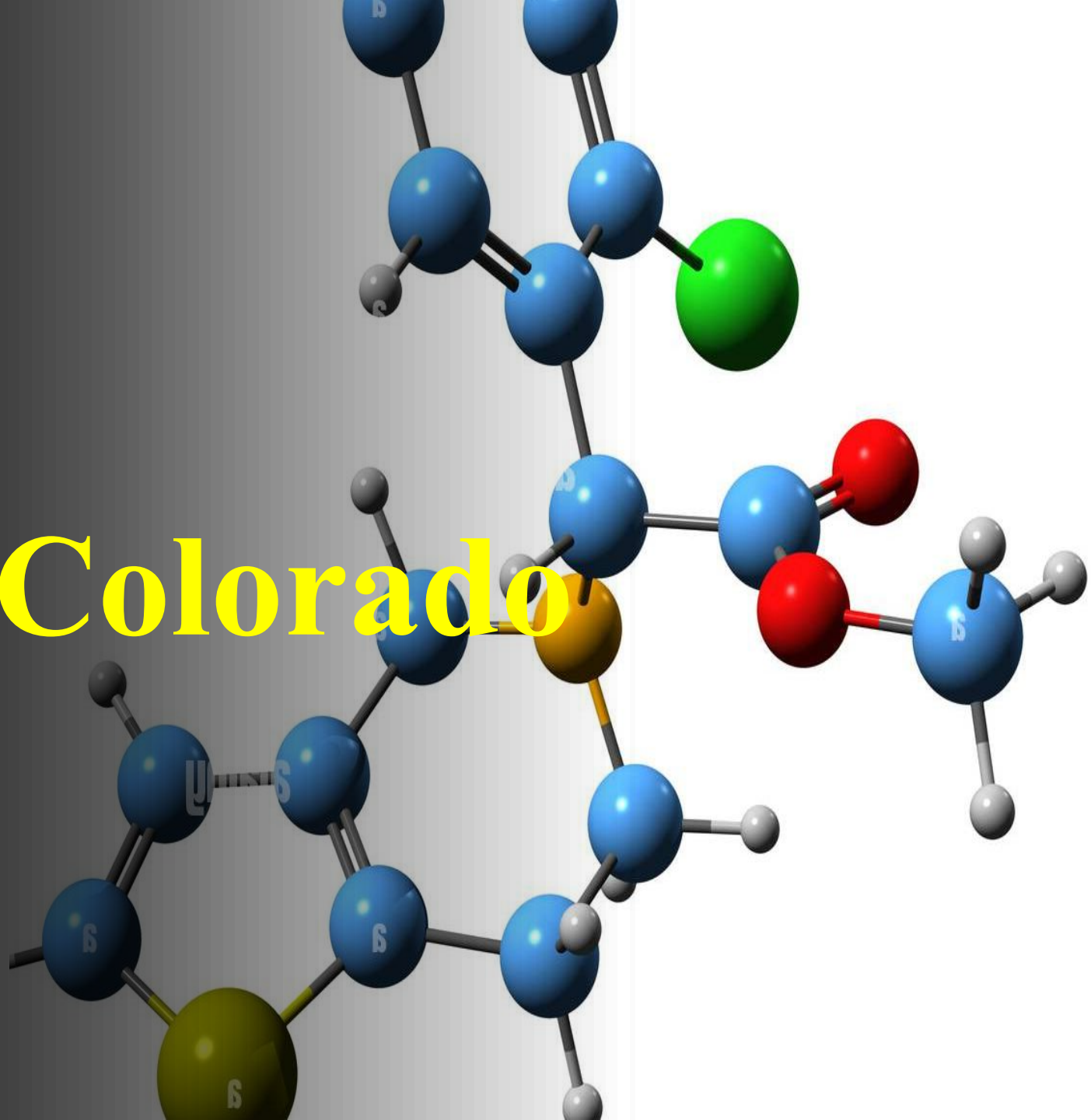
Item	Subject	Report From	Time
1	**Welcome and Procedural Information**	Chair - verbal	1330
2	**Patient's Story** To hear a patient story and reflect on the learning outcomes	Director of Nursing - presentation	1330-1400
3	**Reflection on Actions From Previous Stories**	Director of Nursing – attached	1400-1415
3	**Apologies for Absence**	Chair - verbal	1415-1420
4	**Declaration of Interests** To receive any new or amended declarations of interest from Board Members To receive updated written declarations from members	Chair – verbal	
5	**Minutes of the Previous Meeting** To confirm and sign the minutes of the meeting held on 4 April 2013	Chair - attached	1420-1425
6	**Matters Arising from the Minutes**	Chair - verbal	1425-1430
7	**Action Points (Log)** To review progress against previous actions	Chair – attached	1430-1445
8	**Chief Executive's Report** To receive a written report from the CEO on issues to be brought to the Board's attention	CEO – attached	1445-1500
9	**Chair's Report**	Chair – attached	

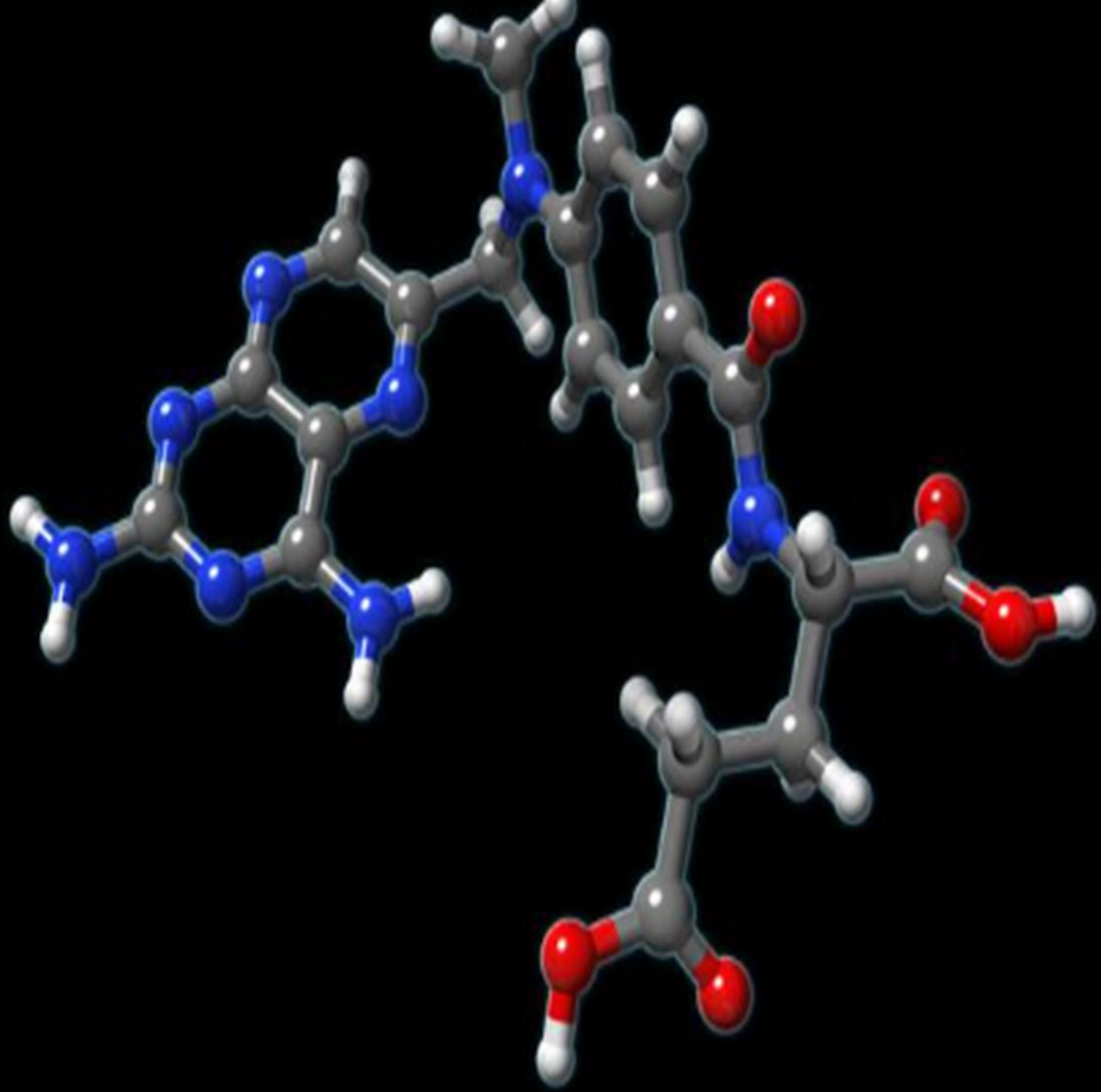
T-1

Insert Clip Here | Night Prior


52-year-old | Chest Pain

University of Colorado

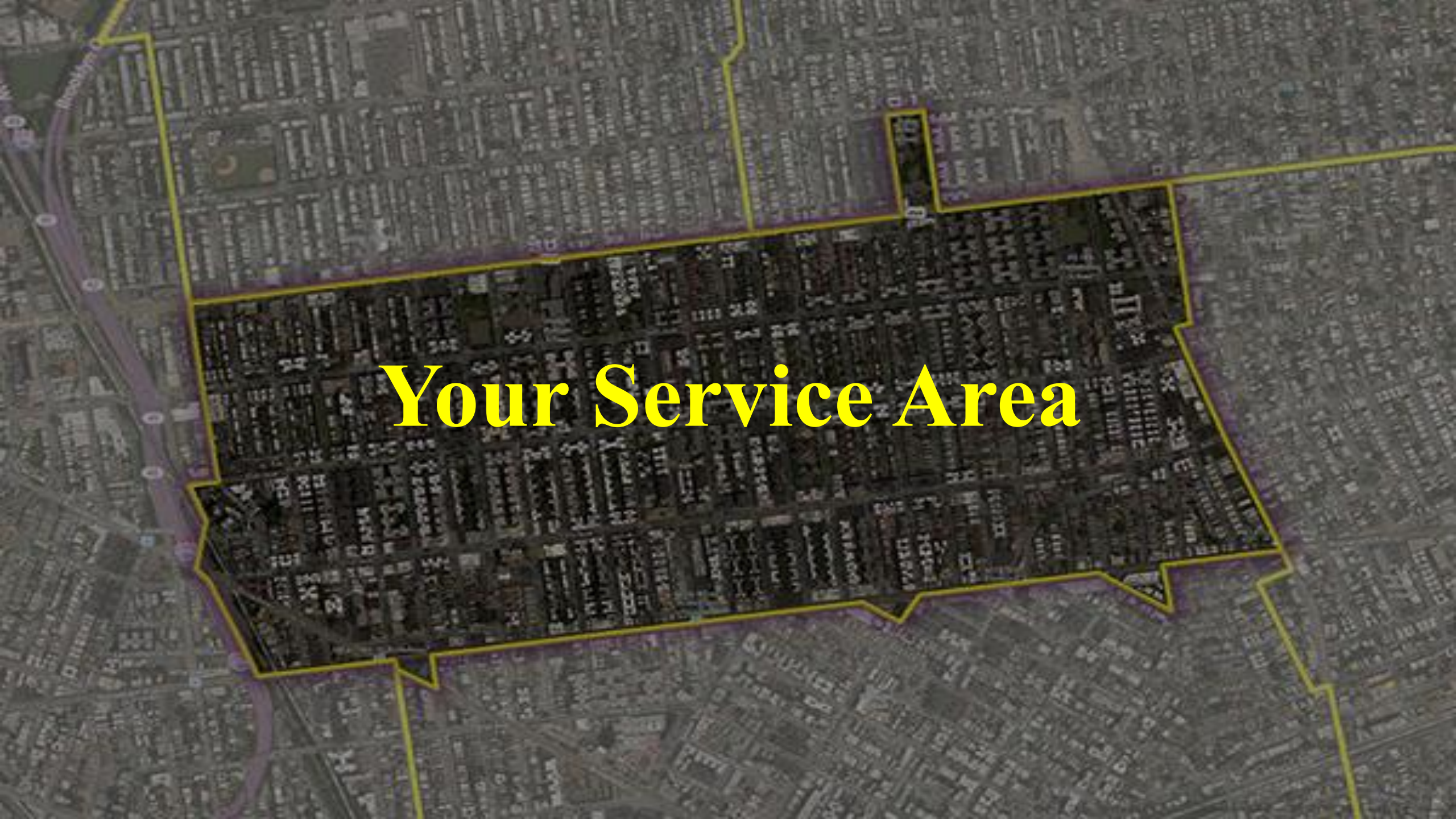





Personalized

Harvest Data

Meaningful Use


Your Service Area

Alvarado Score for Acute Appendicitis

Predicts likelihood of appendicitis diagnosis.

When to Use | Pearls/Pitfalls | Why Use

Signs

Right lower quadrant tenderness	**No 0**	Yes +2
Elevated temperature (37.3°C or 99.1°F)	**No 0**	Yes +1
Rebound tenderness	**No 0**	Yes +1

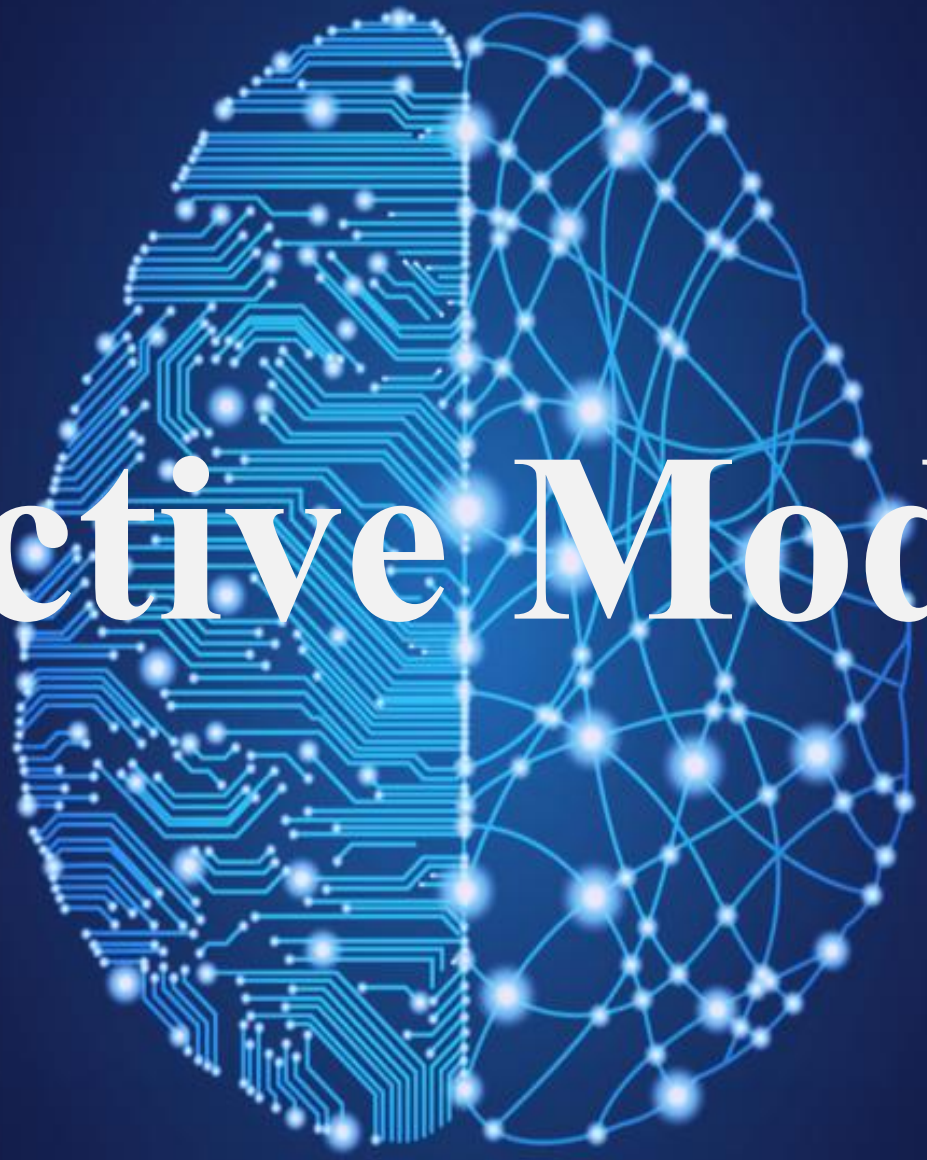
Symptoms

Migration of pain to the right lower quadrant	**No 0**	Yes +1
Anorexia	**No 0**	Yes +1
Nausea or vomiting	**No 0**	Yes +1

0 points

Unlikely appendicitis by the Alvarado Score.

Predictive Modelling



Screening Tools

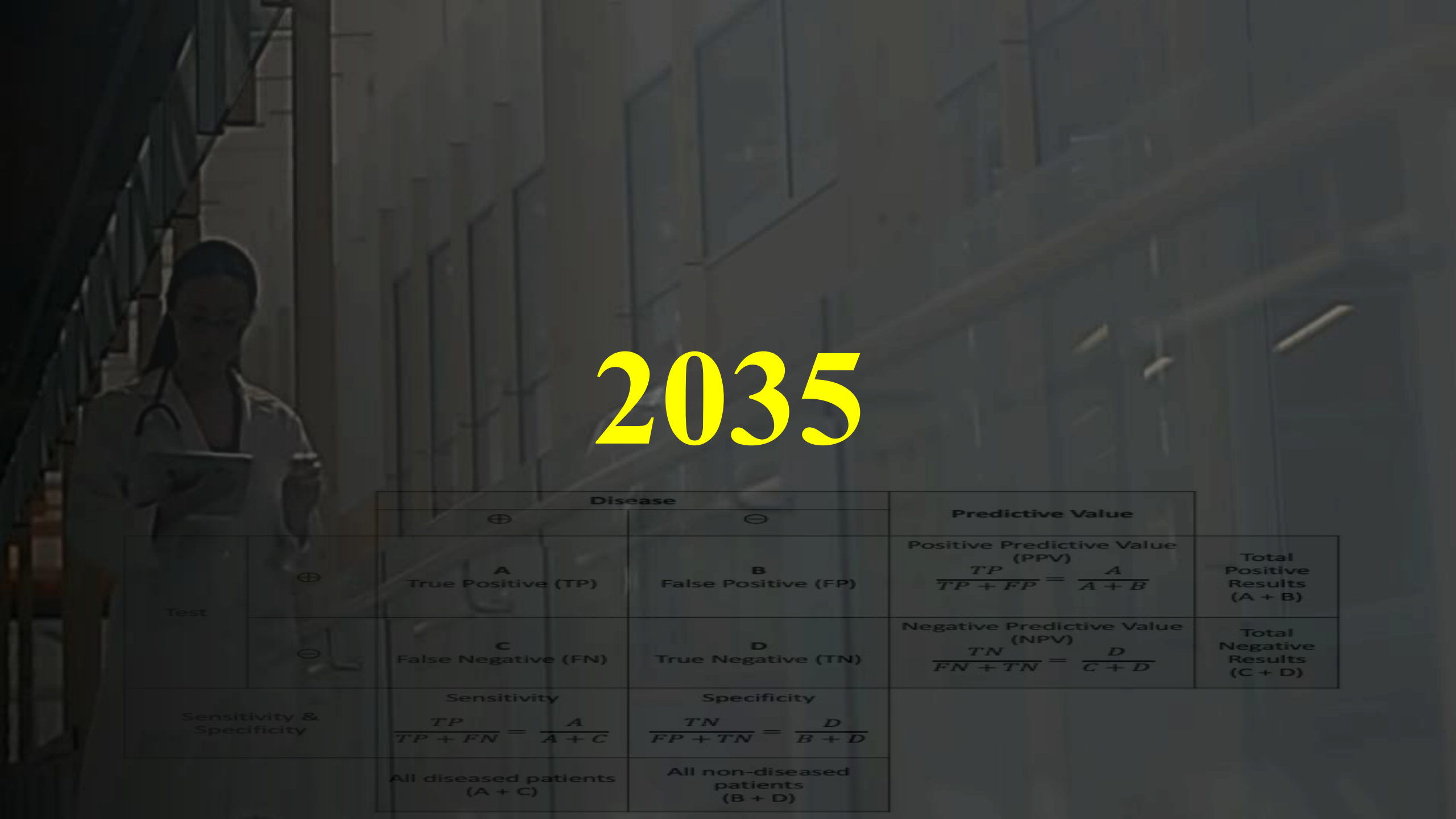
		Disease		Predictive Value	
		⊕	⊖		
Test	⊕	A True Positive (TP)	B False Positive (FP)	Positive Predictive Value (PPV) $\frac{TP}{TP+FP} = \frac{A}{A+B}$	Total Positive Results (A + B)
	⊖	C False Negative (FN)	D True Negative (TN)	Negative Predictive Value (NPV) $\frac{TN}{FN+TN} = \frac{D}{C+D}$	Total Negative Results (C + D)
Sensitivity & Specificity		Sensitivity $\frac{TP}{TP+FN} = \frac{A}{A+C}$	Specificity $\frac{TN}{FP+TN} = \frac{D}{B+D}$		
		All diseased patients (A + C)	All non-diseased patients (B + D)		

Colonoscopy

		Disease ⊕	Disease ⊖	Predictive Value	
Test	⊕	A True Positive (TP)	B False Positive (FP)	Positive Predictive Value (PPV) $\frac{TP}{TP+FP} = \frac{A}{A+B}$	Total Positive Results (A + B)
	⊖	C False Negative (FN)	D True Negative (TN)	Negative Predictive Value (NPV) $\frac{TN}{FN+TN} = \frac{D}{C+D}$	Total Negative Results (C + D)
Sensitivity & Specificity		Sensitivity $\frac{TP}{TP+FN} = \frac{A}{A+C}$	Specificity $\frac{TN}{FP+TN} = \frac{D}{B+D}$		
		All diseased patients (A + C)	All non-diseased patients (B + D)		

Mount Sinai

		Disease ⊕	Disease ⊖	Predictive Value	
Test	⊕	A True Positive (TP)	B False Positive (FP)	Positive Predictive Value (PPV) $\frac{TP}{TP+FP} = \frac{A}{A+B}$	Total Positive Results (A + B)
	⊖	C False Negative (FN)	D True Negative (TN)	Negative Predictive Value (NPV) $\frac{TN}{FN+TN} = \frac{D}{C+D}$	Total Negative Results (C + D)
Sensitivity & Specificity		Sensitivity $\frac{TP}{TP+FN} = \frac{A}{A+C}$	Specificity $\frac{TN}{FP+TN} = \frac{D}{B+D}$		
		All diseased patients (A + C)	All non-diseased patients (B + D)		

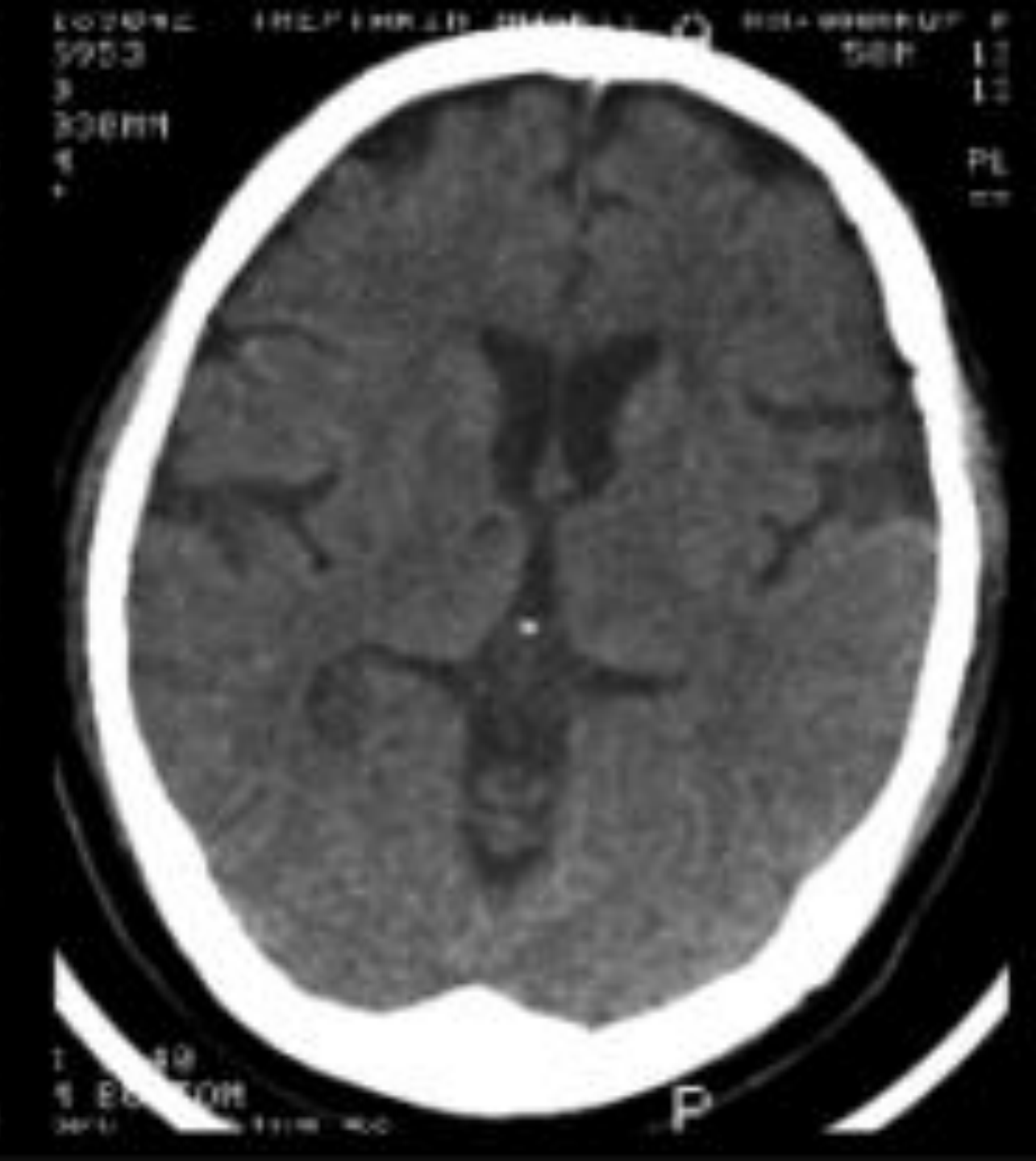


		Disease ⊕	Disease ⊖	Predictive Value	
Test	⊕	A True Positive (TP)	B False Positive (FP)	Positive Predictive Value (PPV) $\frac{TP}{TP+FP} = \frac{A}{A+B}$	Total Positive Results (A + B)
	⊖	C False Negative (FN)	D True Negative (TN)	Negative Predictive Value (NPV) $\frac{TN}{FN+TN} = \frac{D}{C+D}$	Total Negative Results (C + D)
Sensitivity & Specificity		Sensitivity $\frac{TP}{TP+FN} = \frac{A}{A+C}$	Specificity $\frac{TN}{FP+TN} = \frac{D}{B+D}$		
		All diseased patients (A + C)	All non-diseased patients (B + D)		


Population Health


62-year-old | Weakness

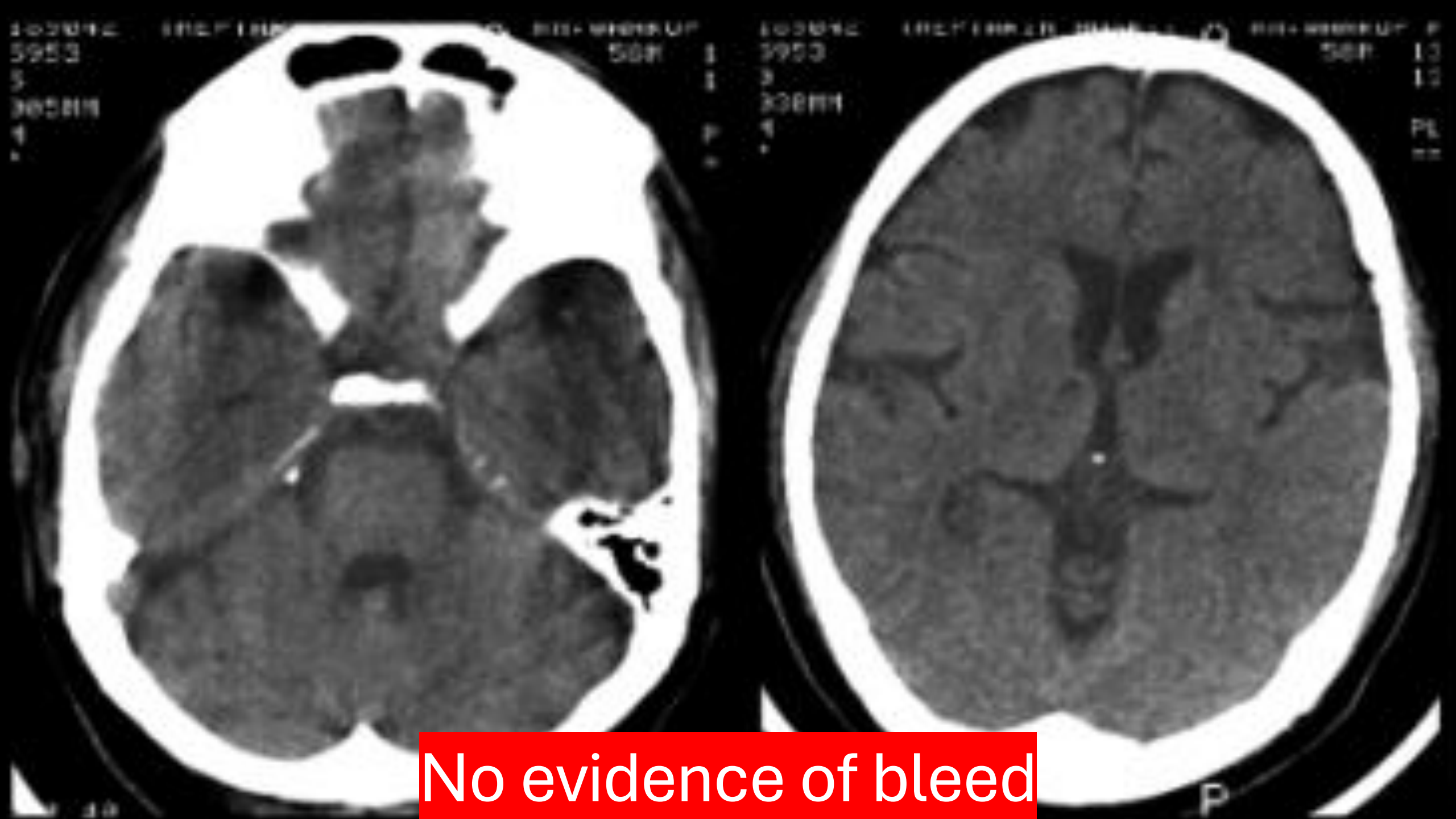

H4
Hill-Rom



T-1

Insert Clip Here | Night Prior

Code Team


No evidence of bleed

NIHSS Free Text : Answers orientation question to location correctly, but not to month, year, city, or state.

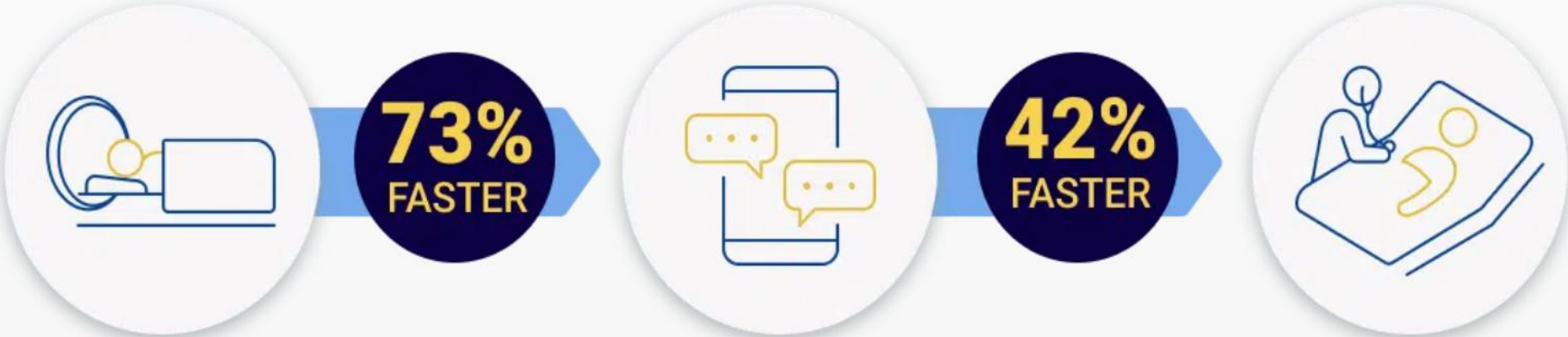
Pre-Morbid Modified Rankin Scale:
Unable to assess

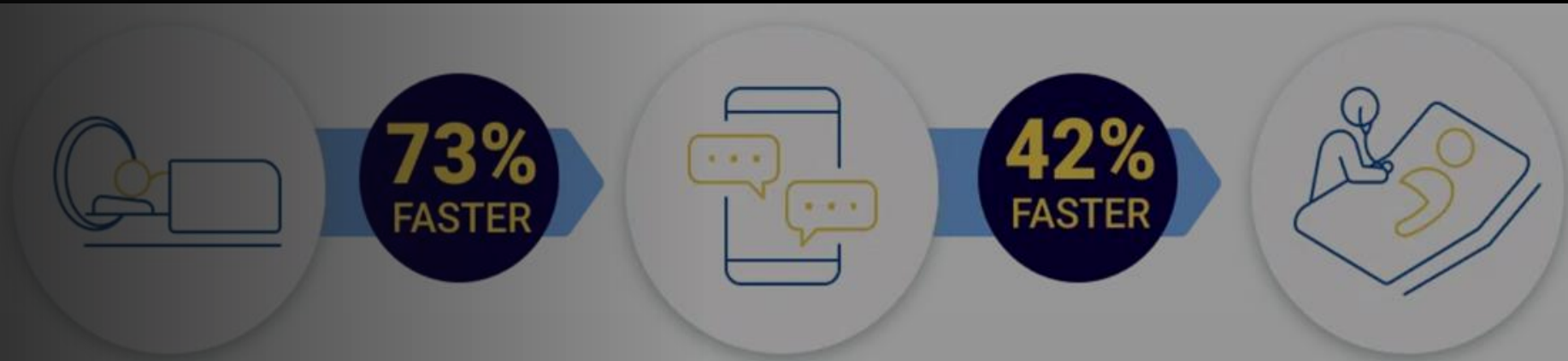
Spoke with : Dr. Patel
I reviewed the available imaging via A.I. software VIZ and initiated discussion with the primary provider

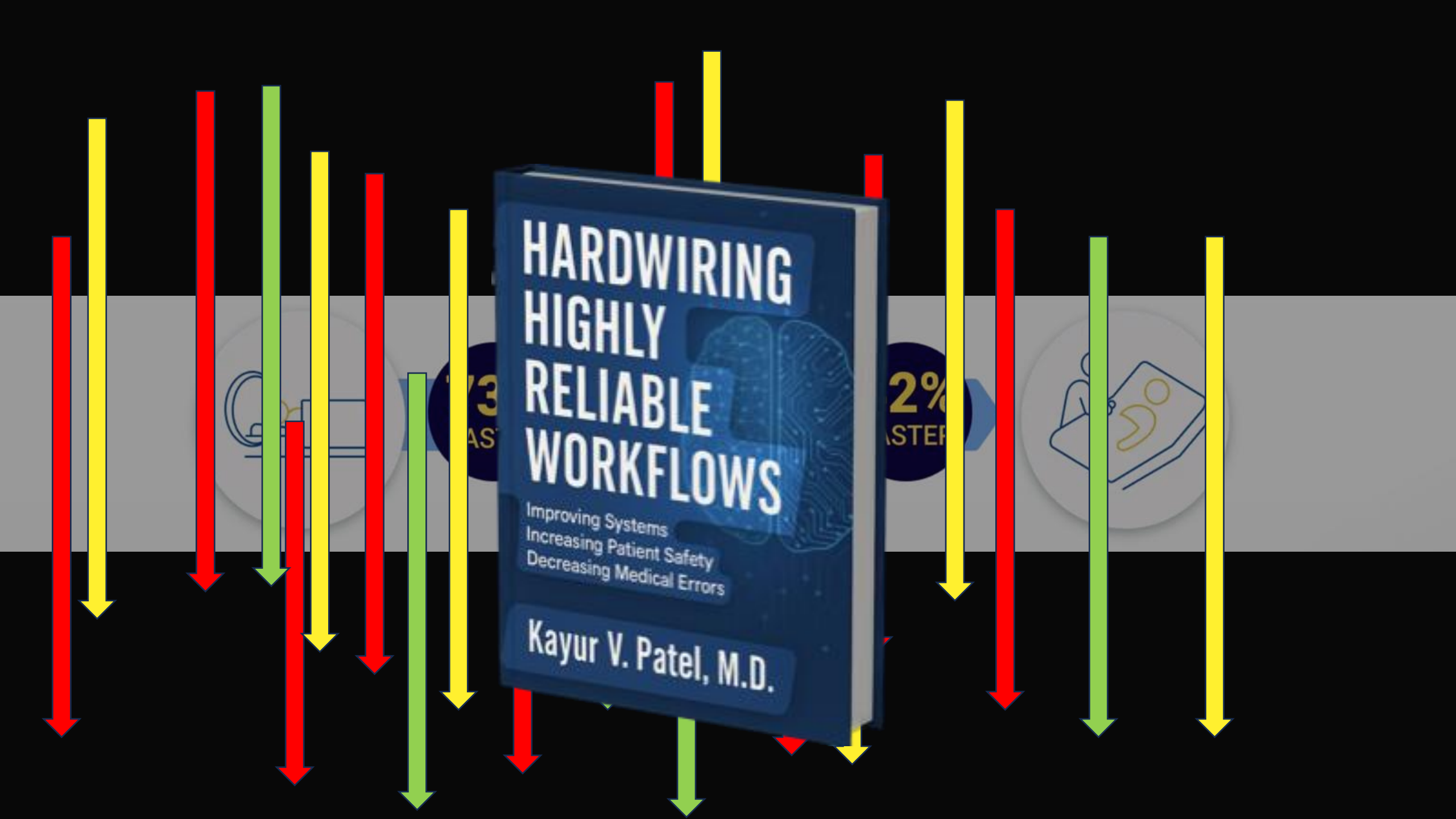
This consult was conducted in real time using interactive audio and video technology. Patient was informed of the technology being used for this visit and agreed to proceed. Patient located in hospital and provider located at home/office setting.

Patient is being evaluated for possible acute neurologic impairment and high probability of imminent or life-threatening deterioration. I spent total of 30 minutes providing care to this patient, including time for face to face visit via telemedicine, review of medical records, imaging studies and discussion of findings with providers, the patient and/or family.

Bedside Telepresence Applications


73%
FASTER
42%
FASTER


73%
FASTER
42%
FASTER


HARDWIRING
HIGHLY
RELIABLE
WORKFLOWS
Improving Systems
Increasing Patient Safety
Decreasing Medical Errors
Kayur V. Patel, M.D.


Outcomes

2024 | 2 out of 600 were accepted by Medicare for payment

Algorithms

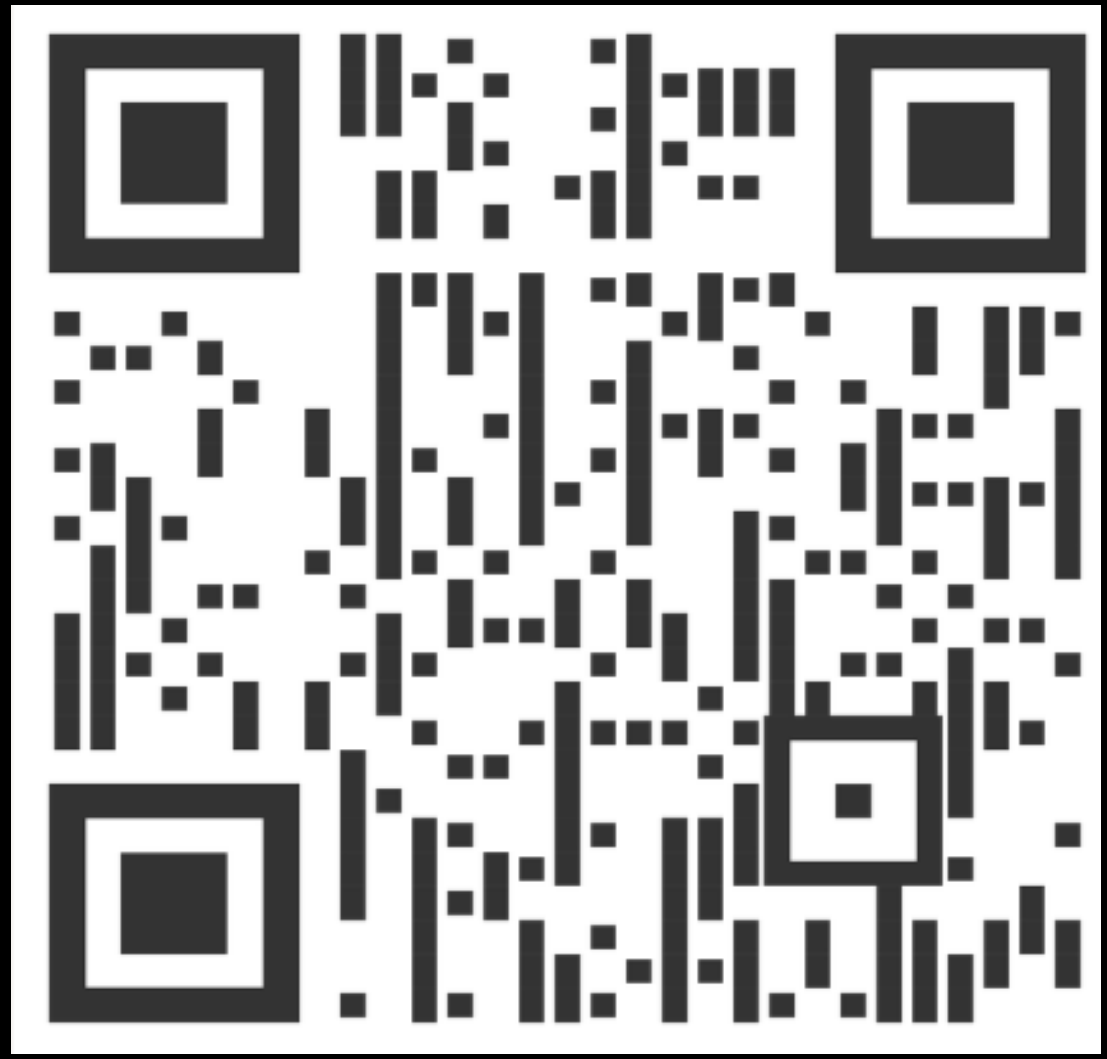
T-1

Insert Clip Here | Night Prior

"…The original research article was published July 17 by BMJ Quality & Safety. Results of the new analysis of national data found that across all clinical settings, including hospital and clinic-based care, an estimated *in the last hour* *91 Americans died or are permanently disabled by diagnostic* error each year, confirming the pressing nature of the public health problem….July 2023, John Hopkins

https://qualitysafety.bmj.com/content/qhc/33/2/109.full.pdf
https://www.hopkinsmedicine.org/news/newsroom/news-releases/2023/07/report-highlights-public-health-impact-of-serious-harms-from-diagnostic-error-in-us

KPatel@MyPrivate.MD



317-296-5212

Rural Health Transformation Program

https://www.aafp.org/news/blogs/freshperspectives/entry/doctor_or_patient_who_owns.html

Federal Goals: The CMS Rural Health Transformation Program

CMS launched the $50 billion Rural Health Transformation Program under the federal reconciliation legislation. Every state received an award. CMS has organized the program around five priority goals:

Technology Innovation – Modernize health technology to support preventive care and data-driven decision-making.

Workforce Development – Strengthen and expand the rural health workforce to sustain local care delivery.

Sustainable Access – Improve access to primary, specialty, and maternal care close to home.

Wellness and Prevention – Advance prevention and wellness to reduce chronic disease and improve quality of life.

Sustainable Partnerships – Build the regional partnerships and program infrastructure that keep transformation work going past the five-year award period.

Each state was asked to organize its plan around these federal goals and to show how state initiatives map to them. FY 2026 funds must be expended by September 30, 2027. Half of each year's pool is distributed equally across states and the other half is competitive, recalculated annually based on each state's implementation progress and performance scores. That structure puts a premium on programs that can demonstrate measurable results inside Year 1.