

Who will treat the most complex
patients?

“No success goes unpunished”

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Who will take a tough case?

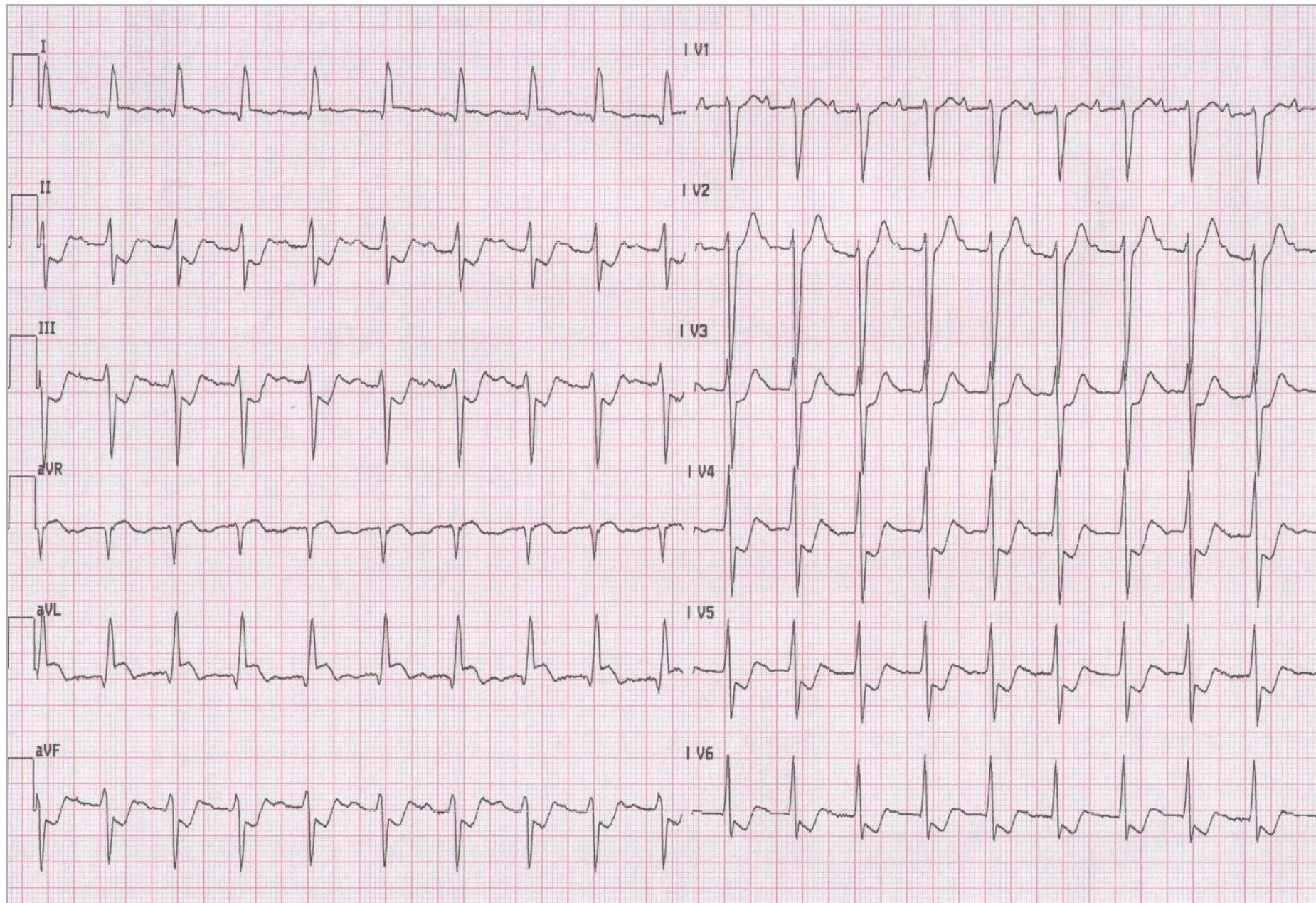
The way it was

“This case is too complex and so we should defer to surgery.”

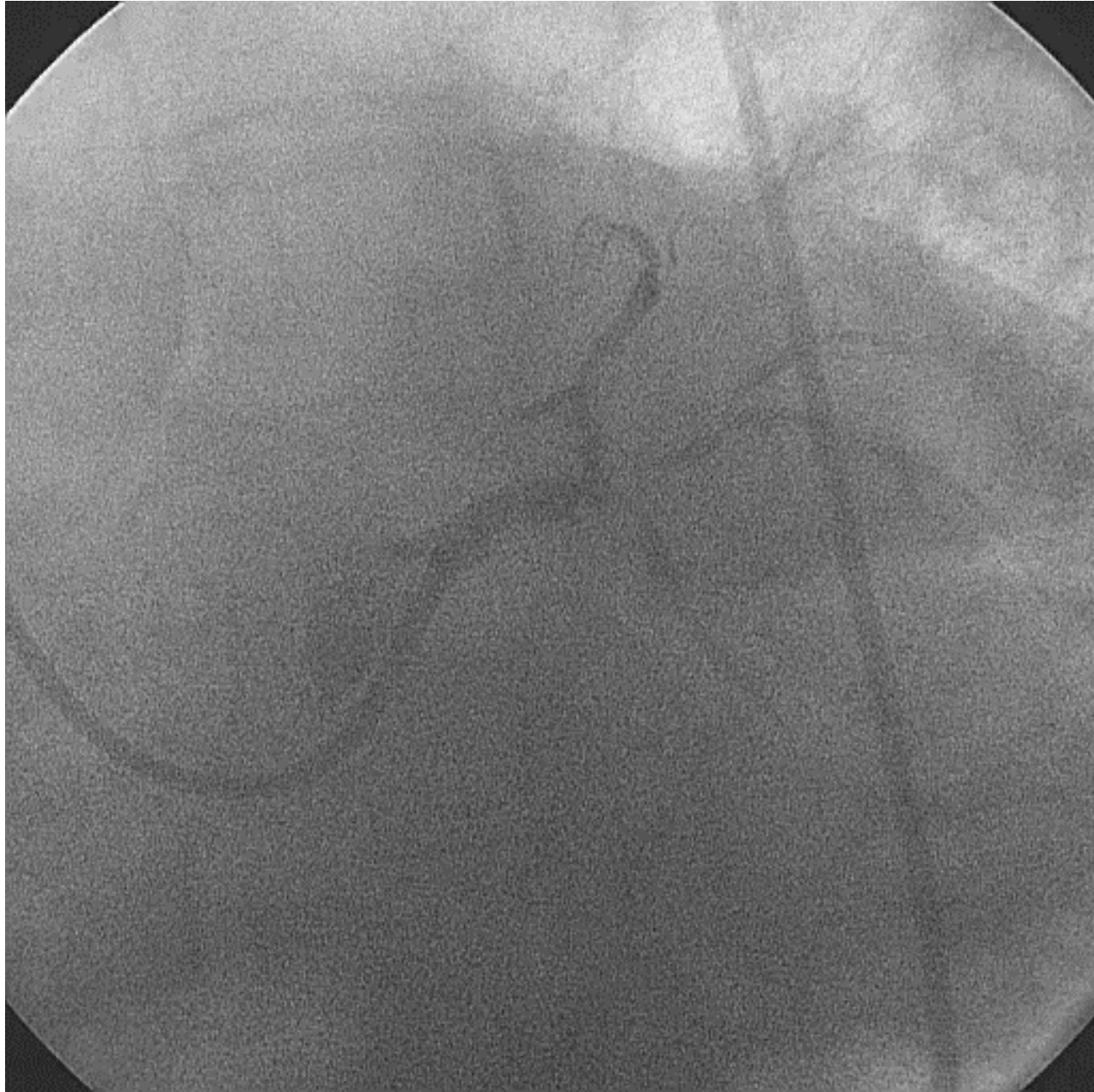
The way it is

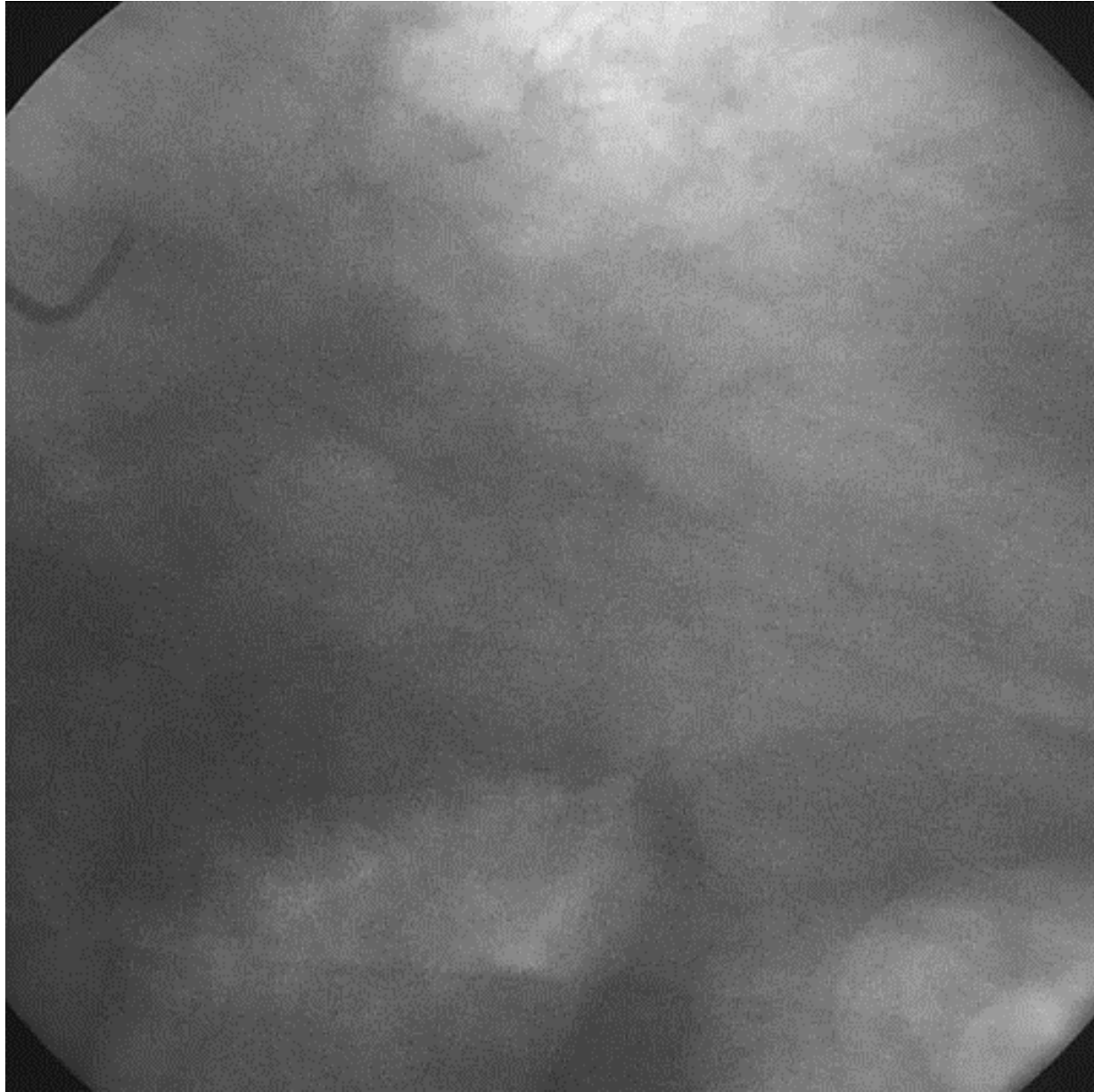
“This case has too high a surgical risk so you should give PCI a try.”

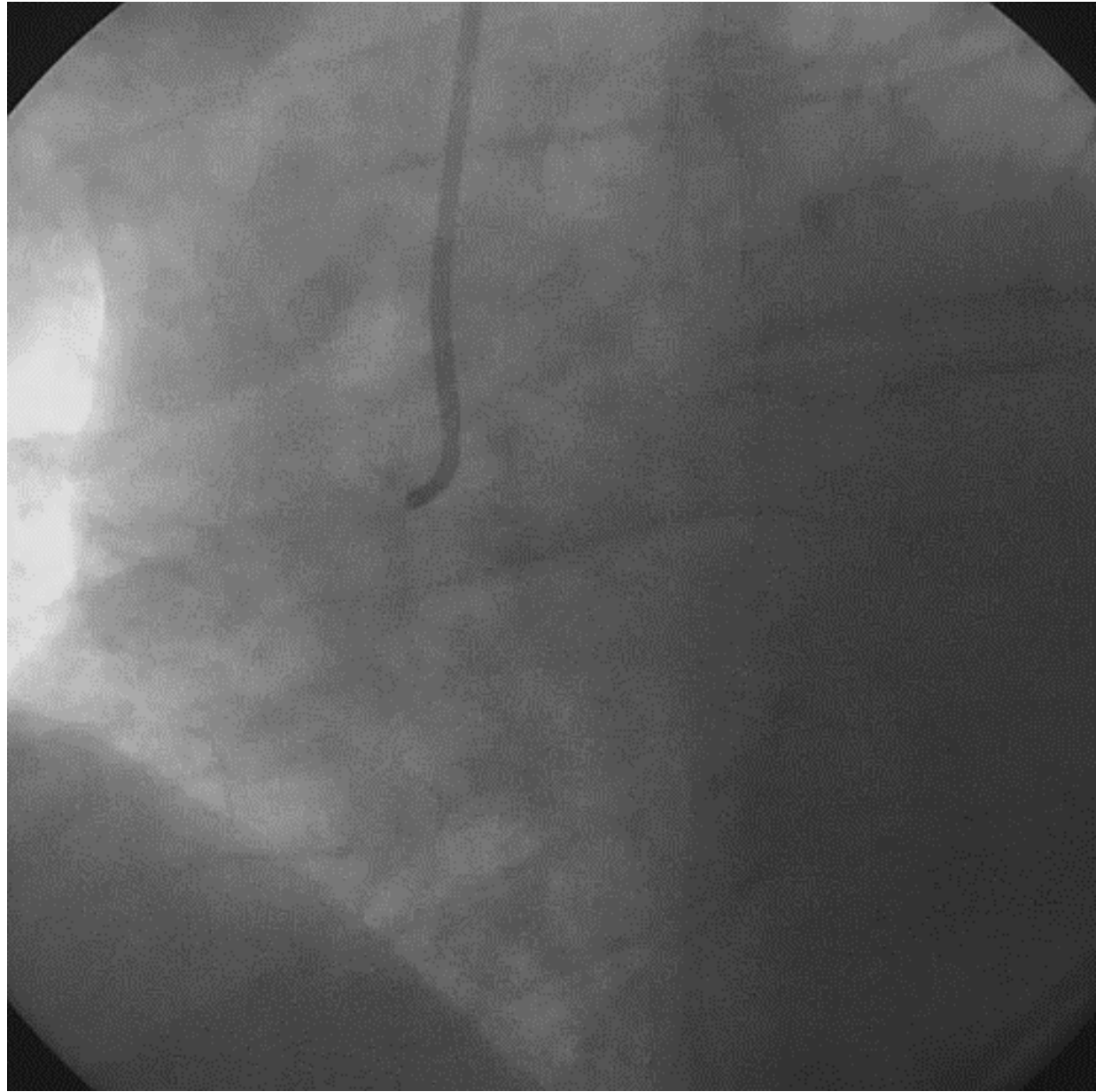
Patient Demographics	Clinical Presentation
Age: 85 Gender: Male	ACS-NSTEMI Rest pain LVEF 40 %
Risk Factors	Past Medical History
CKD DM2 HTN	Moderate MR Prior CVA PAD Severe COPD











What should be done?

CABG

PCI

Medical
therapy

CABG

VS

PCI

High risk patient:

LAD (diffuse disease)

85 yrs old

Important co-morbidities:

COPD, PAD, CKD III, Previous stroke

High risk patient:

Complex procedure- LM Trifurcation

Diffuse calcified disease

Need for debulking (Rota)?

Need for MCS?

STS Risk Scoring:

Surgical Expectations

Perioperative Outcome	Estimate %
Operative Mortality	7.66%
Morbidity & Mortality	19.4%
Stroke	1.37%
Renal Failure	11.8%
Reoperation	2.54%
Prolonged Ventilation	8.58%
Deep Sternal Wound Infection	0.186%
Long Hospital Stay (>14 days)	13.3%
Short Hospital Stay (<6 days)*	20.1%

SYNTAX II score Score

Decision making -between CABG and PCI- guided by the SYNTAX Score II to be endorsed by the Heart Team.

PCI

SYNTAX Score II:	48.5
PCI 4 Year Mortality:	28.3 %

CABG

SYNTAX Score II:	48.8
CABG 4 Year Mortality:	29.0 %

Treatment recommendation : CABG or PCI

PCI with Trifurcation stenting



Residual SYNTAX score = 15

Where is the evidence?

- There are no randomized trial of such complex patients.
- There is a recent registry of over 700 surgical turndowns with PCI performed at 20 centers experienced in high risk complex patients.

Salisbury AC et al. JACC:CV Intv 2023;16:261-273

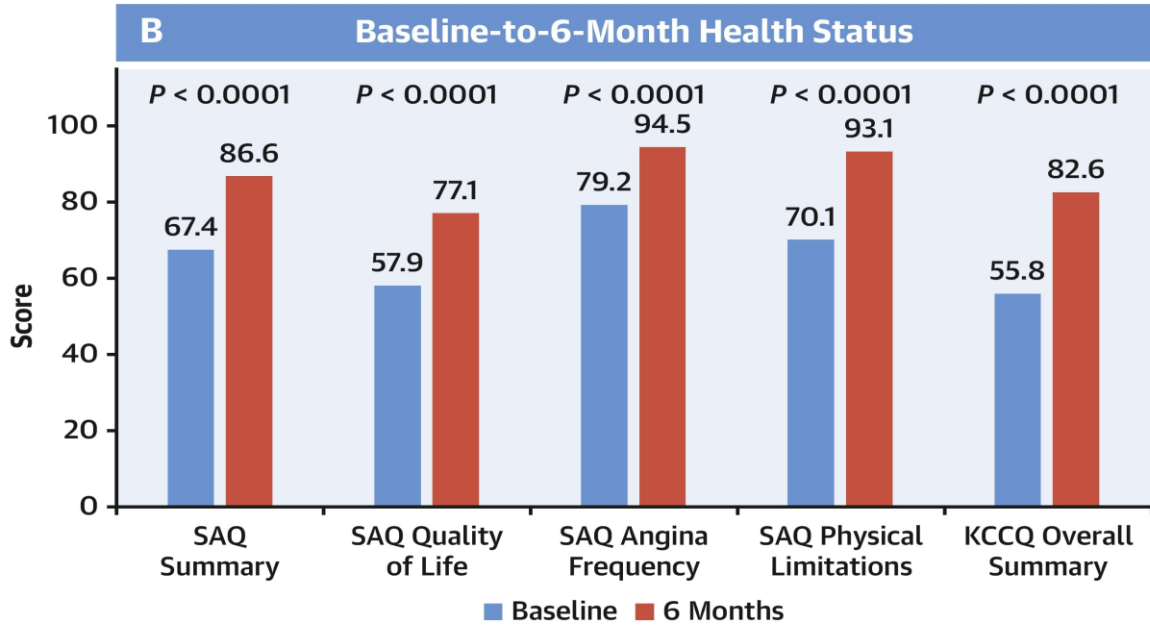
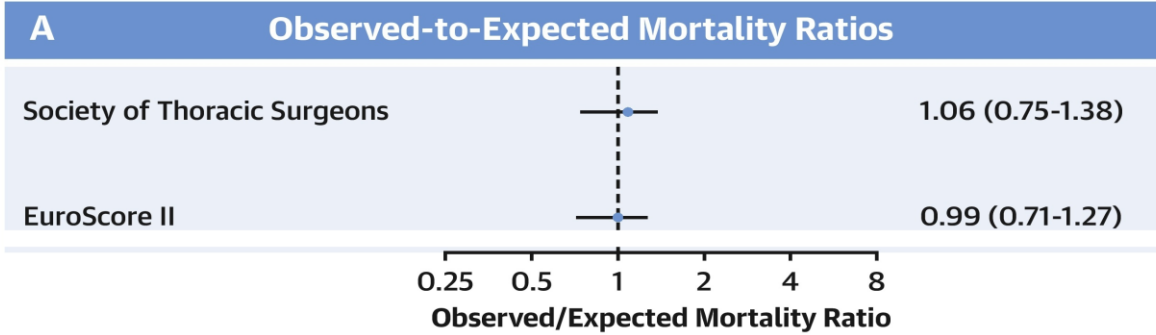
- Patients were judged to be at “prohibitive risk for CABG”
- STS Score (30 day projected mortality with CABG) was 5.3
- However the 30 day mortality after PCI was 5.6%
- Six month mortality was 12.3%

“Prohibitive surgical risk”

- Poor targets 18.9%
- Severe systolic dysfunction 14.6%
- Severe lung disease 15.4%

Residual SYNTAX score =15, well above the “reasonably complete revascularization” value of 8.

PCI Outcomes and Mortality Risk Scores for Surgically Ineligible Patients With Left Main or Multivessel CAD (N = 726)



Salisbury AC, et al. J Am Coll Cardiol Intv. 2023;16(3):261-273.

Future Investigations?

- Can a randomized trial be done?
- Would real equipoise exist for some group?
- Would the results apply broadly or only to the most highly skilled operators?
- Will surgeons operate on patients with STS scores above 5 who they estimate to have a much higher risk of @10%?
- Local registries of high risk patients should be mandatory.

For you CHIP operators-----

- No spectacular success will go unpunished!
- The more tough cases you take, the more you will get. (And maybe that is a good thing)