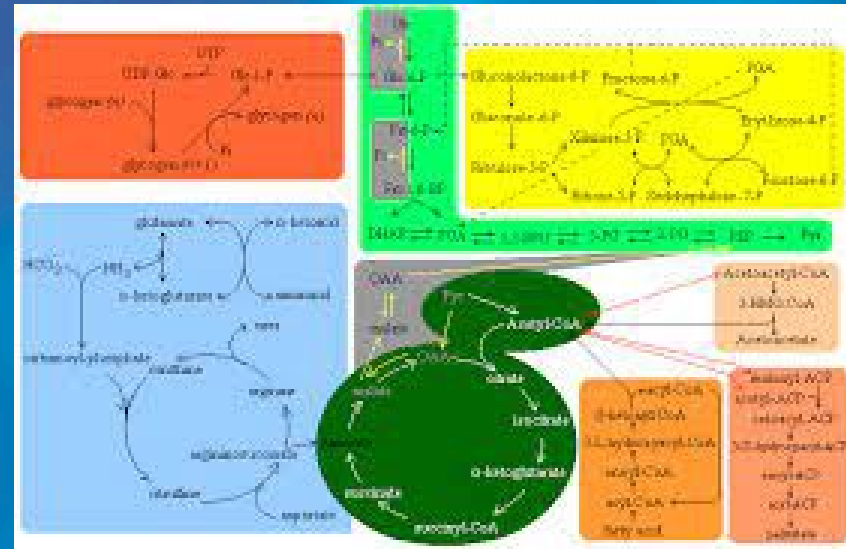# Developing uniform global standards for colonoscopy quality: Which, defining threshold values, and how to make practical?

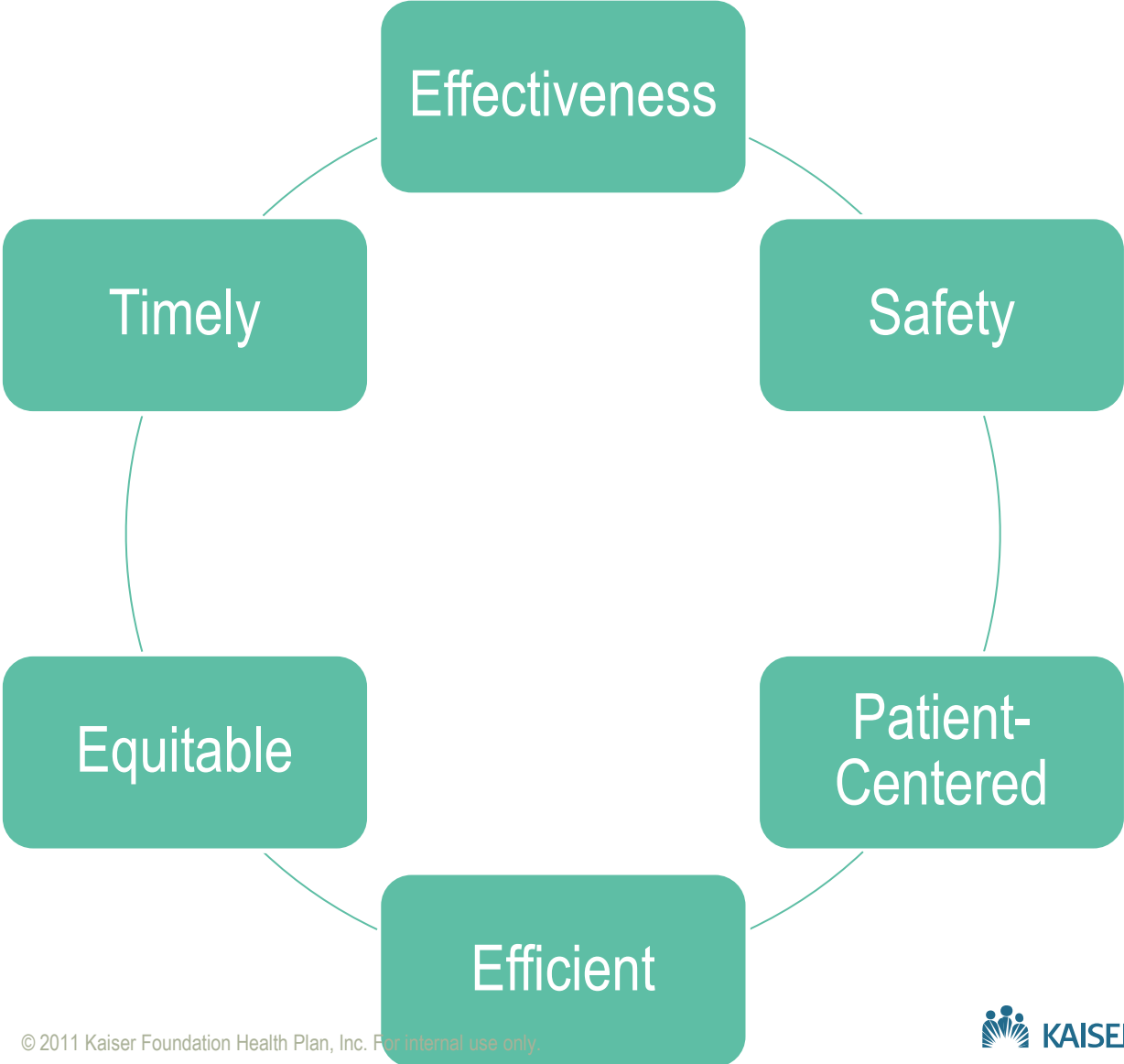OR

Doug Corley MD, PhD

Director, Delivery Science & Applied Research

Kaiser Permanente, Northern California

The Agency for Healthcare Research & Quality created quality metric domains but are hard to define & measure

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Existing quality metrics struggle for evidence-based recommendations

1 Rate of adequate bowel preparation (min 90%)
2 Cecal intubation rate (min 90%)
3 Adenoma detection rate (min 25%)
4 Appropriate polypectomy technique (min 80%)
   There are insufficient data to set the minimum and target standards reliably, but the proposed values for the use of appropriate polypectomy techniques of ≥80% and ≥90%, respectively, seem relatively easy to achieve

5 Complication rate (min not set)
6 Patient experience (min not set)
7 Appropriate post-poly surveillance (min not set)

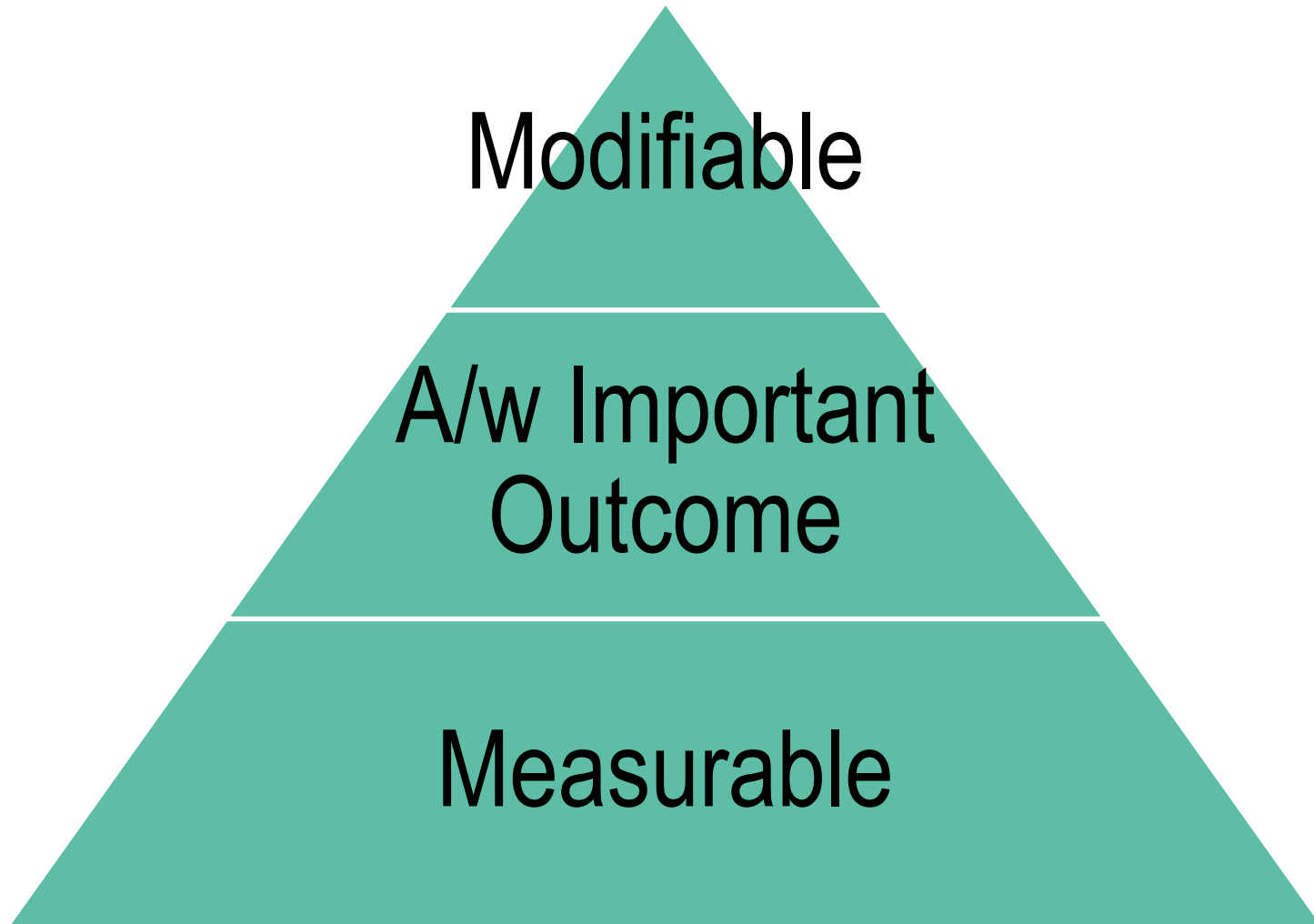**Kaminski et al (ESGE) Quality Improvement Initiative; Endoscopy 2017**
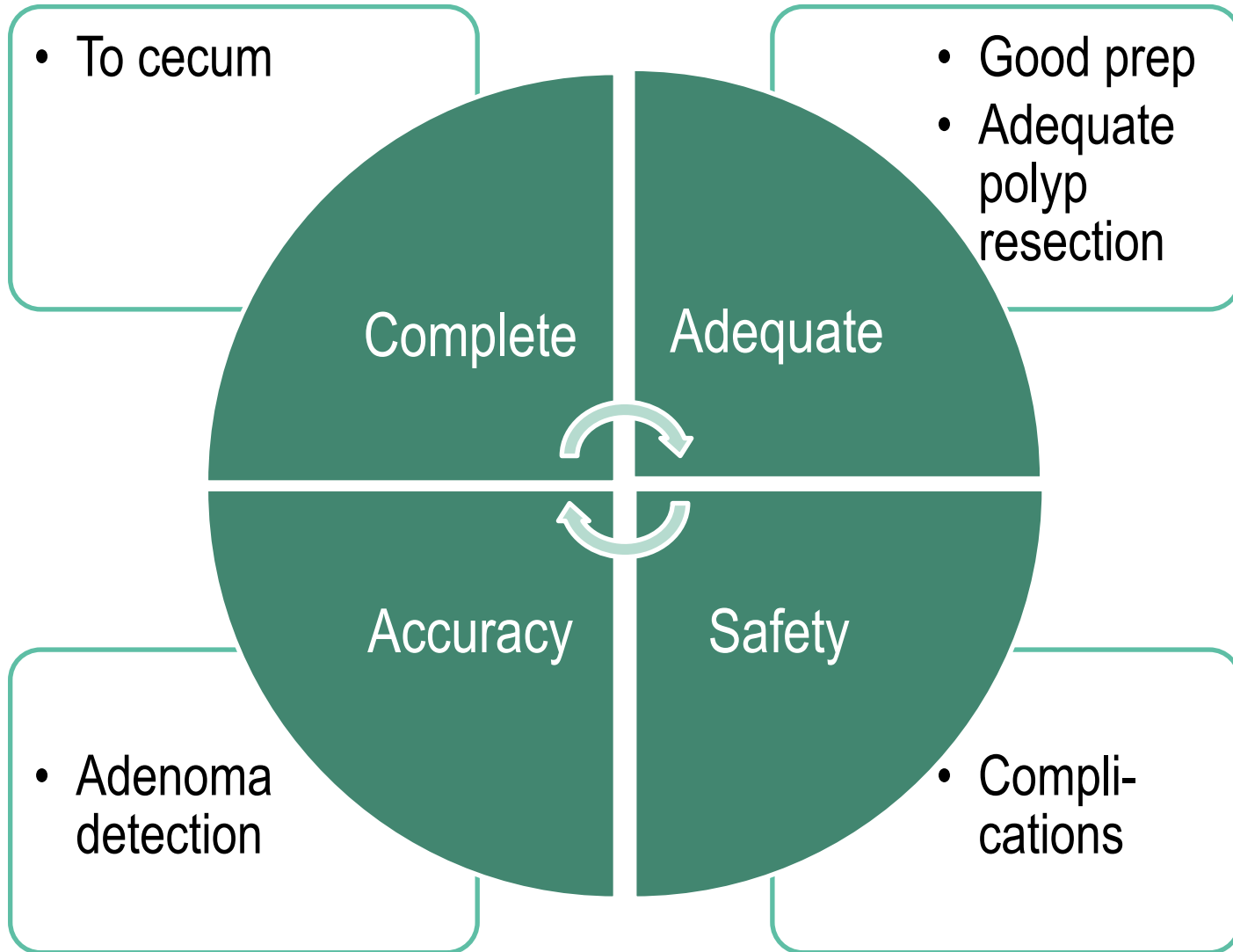
Plan for today

Which Quality Metrics?

Defining Threshold Values

How To Make Practical?

   |

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Quality metrics for procedures (e.g. colo's) start on base of being measurable

Modifiable

A/w Important Outcome

Measurable

Corley, Annals IM 2022 & Selby JNCI 2023

Four proposed domains for procedure metrics help to focus where to start

- To cecum

- Good prep
- Adequate polyp resection

Complete | **Adequate**

Accuracy | **Safety**

- Adenoma detection

- Complications

Corley, Annals IM 2022 & Selby JNCI 2023

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Modifiable: Colonoscopy quality feedback plus regional training can decrease variation in adenoma detect and post-colo cancers

Physicians stratified by < vs. ≥ pre-training ADR median
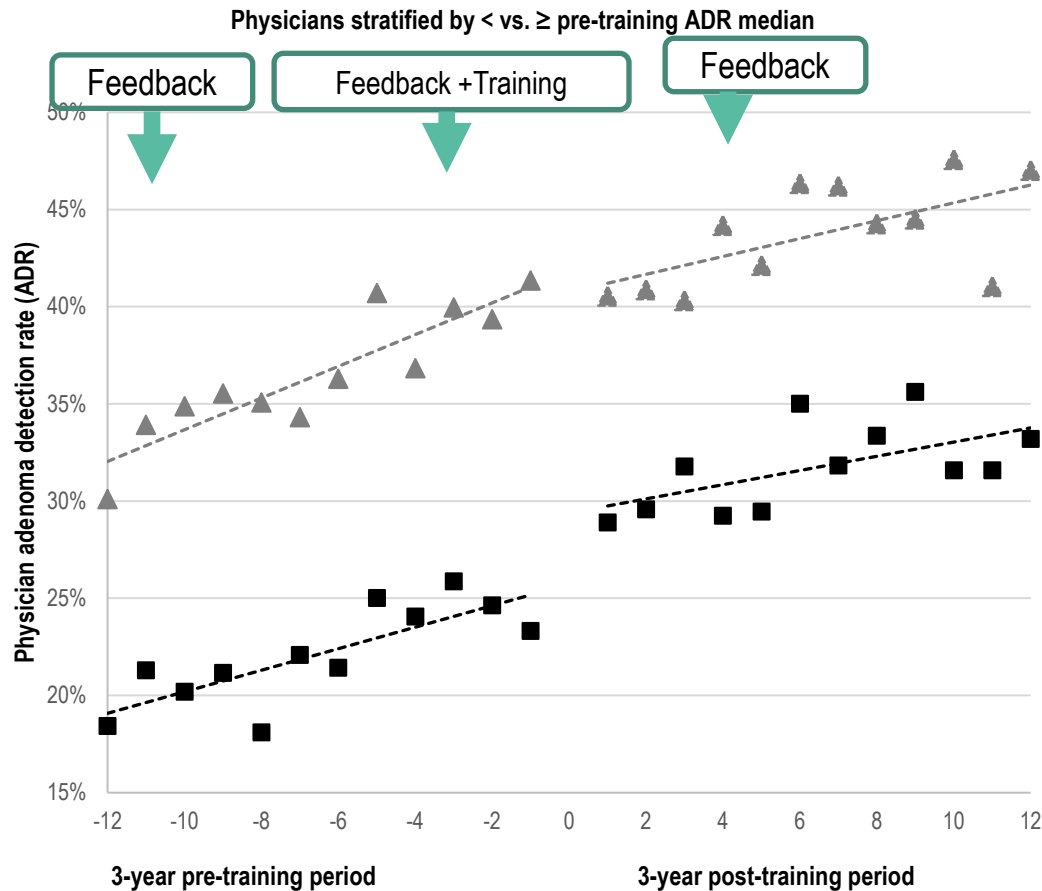
- IMPACT:
- **ADR 25% to 40%**
- Prompt 5% higher lower detectors
- **Decreased variation**
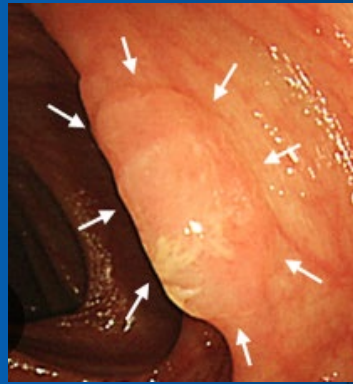- **>50% fewer post-colo CRC**
- Available www.kp.org/dare

Corley, Lee, Jensen, GI Endoscopy 2023

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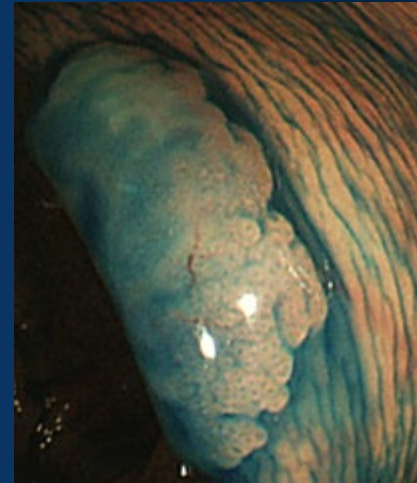
Modifiable: There are several steps where detection can be improved
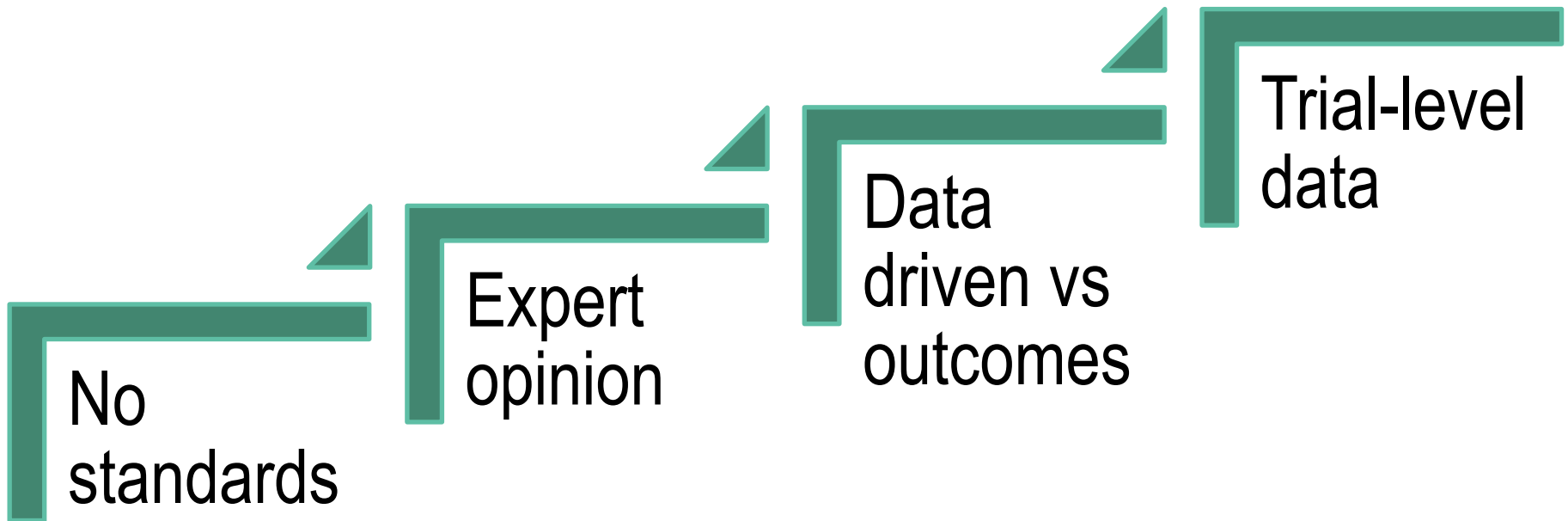

Pre-Exam

Dose 2

Technique

Tools

Rex, Gastroenterol Rep 2023

FLI-0919-SDC-3N

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Which Quality Metrics?

Defining Threshold: Floor vs. Target

How To Make Practical?

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Need to define acceptable threshold for setting thresholds

No standards

Expert opinion

Data driven vs outcomes

Trial-level data

There is strong association of post-polyp risk by physician ADR, especially at lower ADRs
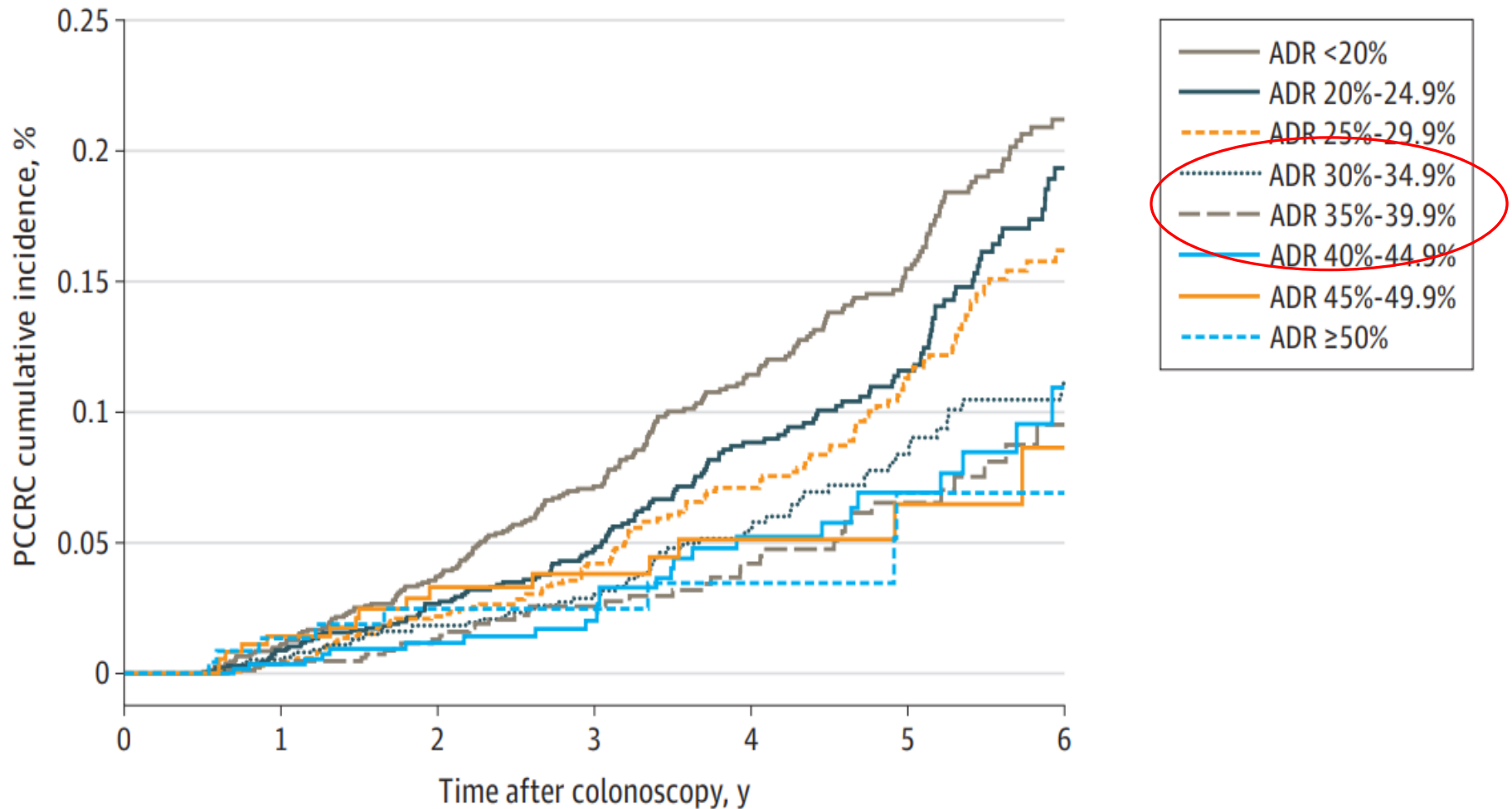
JAMA, PROSPR consortium, 2022

Other thresholds – harder to choose and perhaps should evolve over time with expertise

- Bowel prep
  - "Good" and "excellent" similar for post-colo cancer outcome
    - ≥85% US MSTF 2015
    - ≥90% Eur Soc GIE 2019

- Complete to cecum
  - 90% of overall colonoscopies and 95% of screening colonoscopies US 2015
  - 90% Eur Soc GIE
  - Measures always met may not be useful

- Complete polyp resection
  - Most consistent with process measure

Plan for today

Which Quality Metrics?

Defining Threshold Values

How To Make Practical? Keep it Simple

Many sensitivity/accuracy metrics proposed, most are difficult to measure or imprecise

Indicators

Post-colonoscopy colorectal cancer rate (PCCRC rate)

Advanced adenoma miss rate (AAMR)

Adenoma miss rate (AMR)

Advanced adenoma detection rate (AADR)

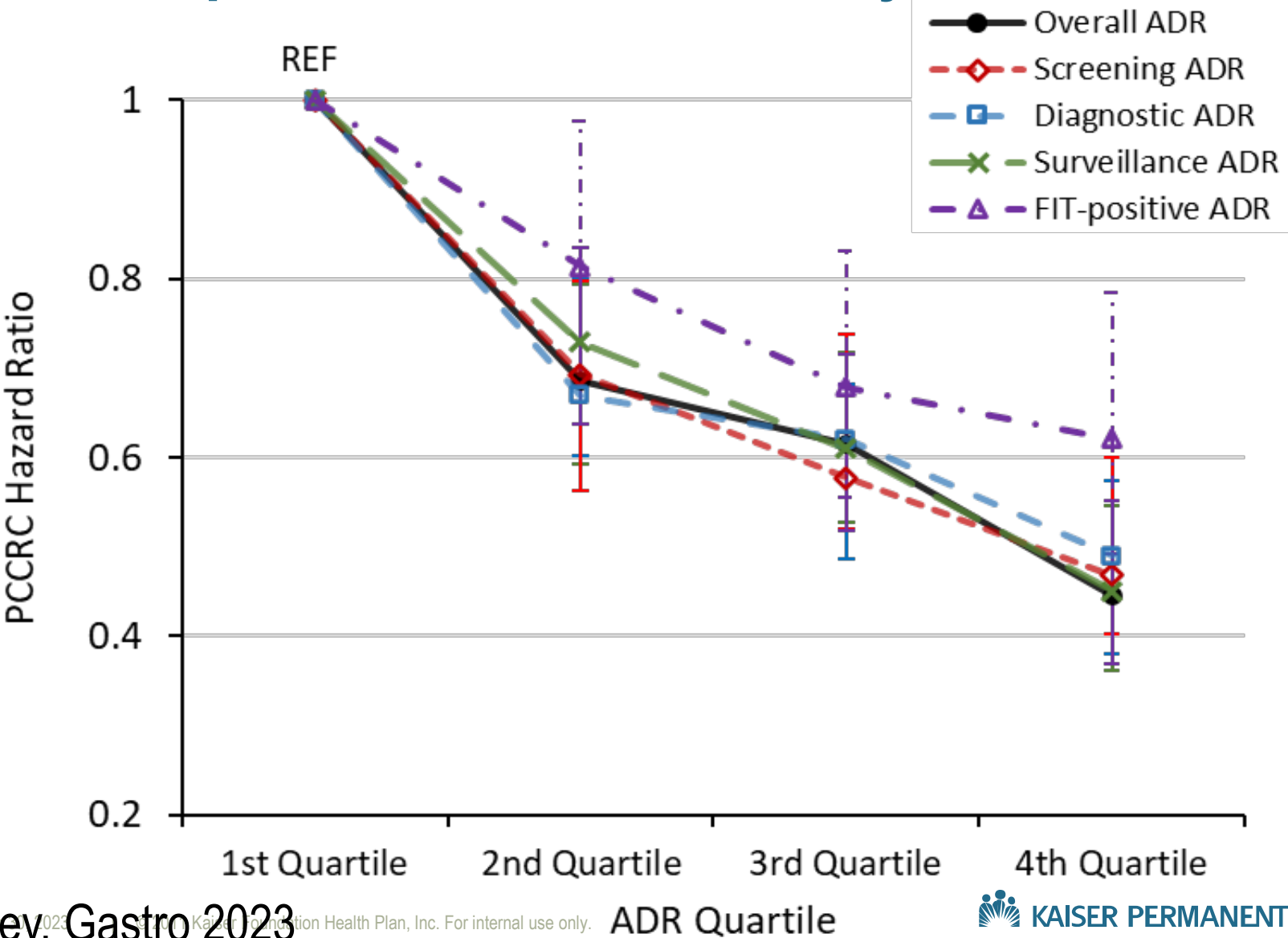Adenomas per colonoscopy (APC)

Adenoma detection rate (ADR)

Polyp detection rate (PDR)

Practicality

- Imprecise
- Imprecise
- Difficult
- Difficult
- Difficult
- Most Feasible
- Game-able

Rex, Gastroenterol Rep 2023

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Overall ADR similar to screening & easier to calculate – pick easiest relevant to your setting

Corley, Gastro 2023

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Next Steps

- Create simple short list
  - Measurable
  - A/w outcome to set threshold
  - Modifiable
  - Practical

Thanks and your recommendations

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