Perception of Personal and Health System Adenoma Detection Rates are Variable Among Practicing Gastroenterologists

De Silva, Sadie[1]; Kaneshiro, Marc[3]; Smith, Brandon[1,3]; Yang, Jamie Olivia[1]; Michael, Bethlehem[1]; Maehara, Cleo K.[2], Uy, Alexandria[2]; Hsu, William[2], Badiee, Jayraan[3]; May, Folasade P[3,4,5]

[1]Department of Medicine, David Geffen School of Medicine, UCLA, Los Angeles, CA, USA
[2]UCLA Department of Radiological Sciences; Data Integration, Architecture and Analytics Group
[3]Vatche and Tamar Manoukian Division of Digestive Diseases, Department of Medicine, David Geffen School of Medicine, UCLA, Los Angeles, CA, USA
[4]Greater Los Angeles Veterans Affairs Healthcare System, Los Angeles, CA, USA
[5]UCLA Kaiser Permanente Center for Health Equity, Jonsson Comprehensive Cancer Center, UCLA, Los Angeles, CA, USA

Disclosures: None to report
Character count: 2847/2900
Abstract due: Thursday 11/30 at 9:00 PM EST
Submission Category: Clinical Practice: Performance metrics, process improvement, quality improvement, and implementation.

Introduction: Adenoma detection rate (ADR) is correlated with low risk of interval colorectal cancer (CRC) and reflects the overall effectiveness of screening colonoscopy. Accurate provider perception of performance can enhance quality efforts while inaccurate perception can hinder progress. We aimed to examine the perception of gastroenterologists (GIs) on ADR in a large academic health system.

Methods: We administered a 14-item electronic survey to all GIs in our health system who performed at least 20 screening colonoscopies between 6/1/2022 and 5/31/2023 (7 endoscopy sites). GIs provided estimates for personal and health system ADRs for male, female, and all patients. We also collected provider characteristics (sex, medical school graduation year, years as an attending, and endoscopy sites). True ADRs were determined by a validated natural language processing algorithm that extracts data from colonoscopy and pathology reports. We compared perceived and true ADRs for each GI, across GI characteristics, and for the health system (all GIs combined).

Results: Forty-one of 46 eligible GIs completed the survey (89.1%); 61% were male and median time since medical school graduation was 13 years (range: 11-19 years). The median number of screening colonoscopies performed was 307 (IQR: 118-442) (Table). The true health system ADR was 42.0% for male patients, 30.3% for female patients, and 35.7% for all patients. GIs perceived that health system ADRs were lower on average than true values and personal ADR estimates were mixed (Table). Significant differences were: overall health system male patient ADR (34.8% v. 42.0%, $p<0.01$) and provider-specific male patient ADR (37.5% v. 42.8%, $p<0.01$). Male providers demonstrated a significant difference between the perceived health system and true ADR for all patients (31.4% v. 35.1%; $p<0.01$) and between perceived and true ADR for male patients (33.9% v. 39.9%; $p<0.01$). Female providers more closely estimated health system ADR for all patients but similarly perceived male ADR significantly lower for male patients (36.3% v. 45.5%, $p<0.01$) (Figure). There were no significant differences between perceived and true ADR by time since medical school, years of practice, or endoscopy site. Bowel prep quality was the most common GI-reported barrier to optimizing ADR, and the most common technique used by GIs to improve ADR was second look colonoscopy in portions of colon (Table).

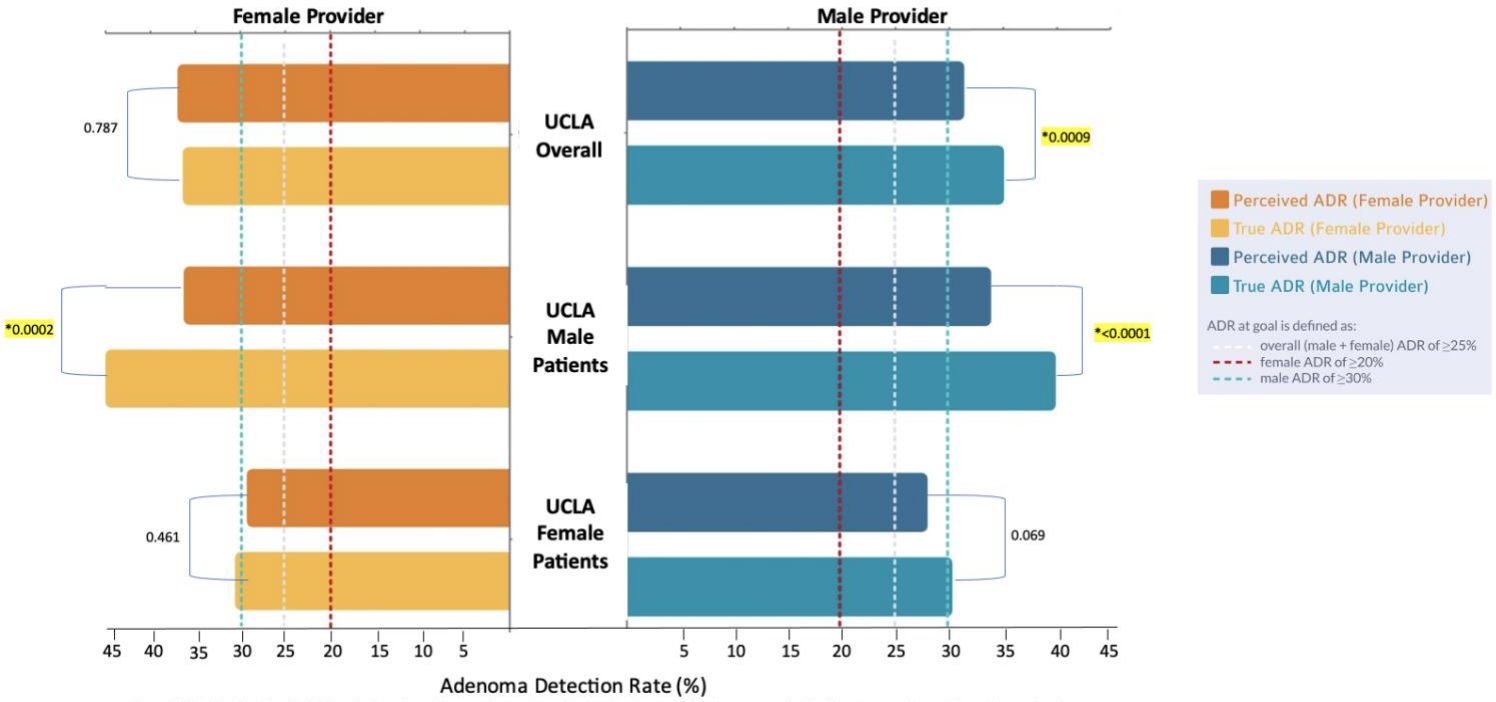
Conclusions: We found that ADRs were above recommended goals and that there appeared be a trend towards underestimation of ADR particularly in male patients. The findings are limited by sample size but suggest that perception of ADR among GIs is generally accurate. Further understanding of provider perception of performance and factors affecting ADR quality will help health systems optimize ADRs.

Tables and Figures:

Table: GI participant characteristics, perceived ADRs, true ADRs and GI-reported factors that influence ADR (n=41)

	Female GI n=16	**Male GI n=25**	**All GIs**
Years since Medical School Graduation (median, IQR)	11 (9.5-18.5)	14 (12-19)	13 (11-19)
Years as GI Attending (n, %)			
<5 years	7 (43.8)	7 (28.0)	14 (34.2)
5-10 years	4 (25.0)	14 (56.0)	18 (43.9)
11-15 years	3 (18.8)	1 (4.0)	4 (9.8)
>15 years	2 (12.5)	3 (12.0)	5 (12.2)
Number of Colonoscopies (median, IQR)	401 (120-462)	270 (118-427)	307 (118-442)
Practice Location (n, %)			
Main academic site	6 (37.5)	13 (52.0)	19 (46.3)
Community site	9 (56.3)	8 (32.0)	17 (41.6)
Main academic site + Community site	1 (6.3)	4 (16.0)	5 (12.2)
Perceived Personal Adenoma Detection Rate (ADR; %)			
Female patients	31.4	30.6	30.9
Male patients	36.5	38.2	37.5
All patients	37.7	34.5	36.0
***True Personal Adenoma Detection Rate (ADR; %)**			
Female patients	30.0	29.8	29.9
Male patients	45.5	41.0	42.8
All patients	36.1	35.4	35.7
GI-reported most common factors making it difficult to optimize ADR (n, %)			
Patient bowel prep quality	16 (100.0)	20 (80.0)	36 (87.8)
Time constraints in the endoscopy unit	9 (56.3)	7 (28.0)	16 (39.0)
Equipment limitations in the endoscopy unit	1 (6.3)	2 (8.0)	3 (7.3)
GI-reported most common techniques used to optimize ADR (n, %)			
Endoscopic assistive devices (i.e., distal scope cap)	3 (18.8)	8 (32.0)	11 (26.8)
Second look colonoscopy in portions of colon	14 (87.5)	17 (68.0)	31 (75.6)
Scope retroflexion in portions of colon	9 (56.3)	13 (52.0)	22 (53.7)
Specific bowel prep protocols	11 (68.8)	9 (36.0)	20 (48.8)
Water-aided colonoscopy	8 (50.0)	8 (32.0)	16 (39.0)
*True personal ADR calculated as the mean ADR of female, male and all GI providers who completed survey			

Figure: Perceived vs true health system ADR of male, female and all patients by provider gender (n=41)



True UCLA (institutional) ADR calculated as the total number of examinations with adenomas divided by the total number of examinations multiplied by 100 (for all colonoscopy examinations at UCLA in the study period); *p value of <0.05 is statistically significant