

Evaluating Unknown Stage by Collaborative Staging Components and Surgical Status for Colon Cancer

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Background

- NAACCR Data Assessment Workgroup has found that the percentage of unknown derived Summary Stage varied substantially by state registry
- % of unknown stage is influenced by not only quality of abstraction but also availability of source information
- Tumor extension, regional lymph node involvement, and metastasis status at diagnosis are key elements that determine the summary stage for colon cancer

Objectives

- To examine % of unknown CS components (tumor extension, lymph node, and metastasis) for unknown stage colon cases
- To identify whether no surgery is one of the underlying causes for unknown stage

Data Source and Eligibility Criteria

- NAACCR CINA Deluxe 1995-2008 Analytic File
 - 2 US state cancer registries were not included in CINA file (48 states)
 - 4 states did not have derived Summary Stage 2000
- 44 US State Cancer Registries were included
- Invasive colon cancer with unknown stage
- Diagnosis year: 2004-2008

Data Exclusions

- Appendix: C18.1
- Colon NET: 8153,8240-8242,8246,8249
- Colon GIST: 8935-8936
- Kaposi sarcoma: 9140
- Hematopoietic diseases: 9590-9989
- Autopsy and DCO

Methods

- Unknown stage
 - Derived Summary Stage 2000 from CSv2 = 9
- State registries were categorized to three groups based on the % of unstaged cases:
 - Low (<5%): 28 registries (10,360 cases)
 - Medium (5%-8%): 11 registries (8,086 cases)
 - High (>8.0%): 5 registries (6,204 cases)

Methods cont'd

- CS component groupings (CSv2)
 - CS extension:
 - ◆ Known CS extension: 100-900
 - ◆ Unknown CS extension: 950, 999
 - CS lymph nodes
 - ◆ Known LN(s) involved: No regional LN involvement (000) or Regional LN involved (050-800)
 - ◆ Unknown: 999
 - CS metastasis at diagnosis
 - ◆ Known: No metastasis (00) or metastasis (08-60)
 - ◆ Unknown: 99

Methods cont'd

- Surgery grouping
 - No surgery performed: code 00
 - Local tumor destruction, no path: codes 10-19
 - Local tumor excision (polypectomy): codes 20-29
 - Colectomy: codes 30-80
 - Surgery, NOS: code 90
 - Unknown: code 99

Findings: Unknown CS Components

- 5.8% (24,650) of invasive colon cancer with unknown stage
 - Range of unknown stage: 2.4% - 15.5% at registry level
- Unknown CS component(s) among unstaged colon cases:

CS Components	Combinations of unknown CS components status			
CS Metastasis	No	No	Unknown	Unknown
CS LN	No	Unknown	No	Unknown
CS Extension	Unknown	Unknown	Unknown	Unknown
Count (%)	4,557 (18.5%)	1,909 (7.7%)	551 (2.2%)	17,633 (71.5%)

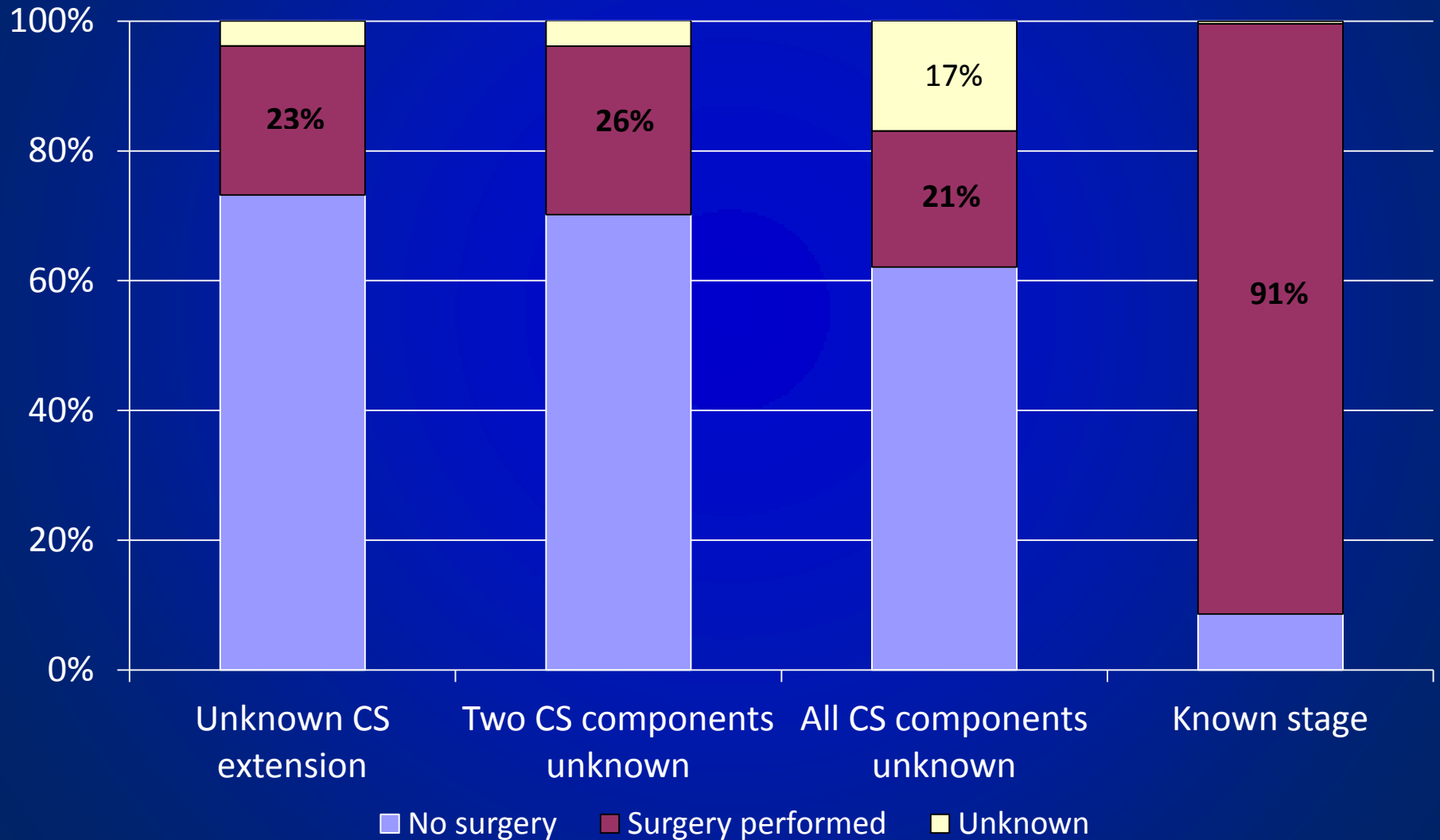
% Unknown CS Components by Registry Group

	Low (<5%) N=10,360	Medium (5-8%) N=8,086	High (>8%) N=6,204
Unknown CS extension	20.7	15.4	18.7
Two CS components unknown	9.9	9.0	11.4
All three CS components Unknown	69.4	75.5	69.9

Findings: Surgical Status

- 78.3% of unstaged colon cases had either none (65%) or unknown (13.3%) surgery
- 16% of unstaged colon cases had either local tumor excision (4.2%) or colectomy (11.8%) performed

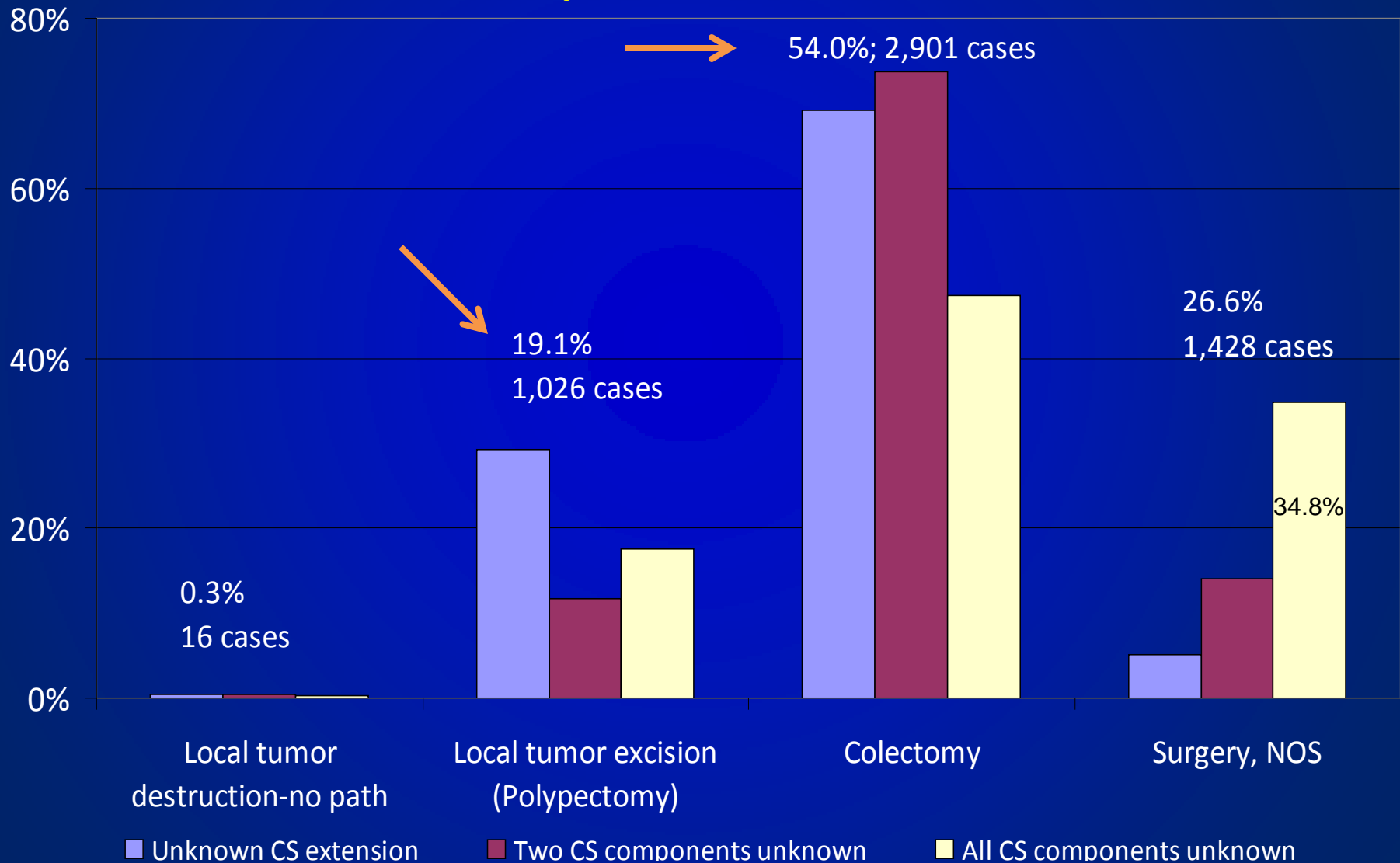
Surgical Status: Unknown CS Components Status vs. Known Stage



Surgical Status by Registry Group

	Low (<5%) N=10,360	Medium (5-8%) N=8,086	High (>8%) N=6,204
No surgery	73.8	57.5	59.8
Local tumor destruction, no path	0.0	0.1	0.1
Local tumor excision (polypectomy)	3.5	5.9	2.9
Colectomy	8.3	14.1	14.6
Surgery, NOS	1.7	4.0	14.9
Unknown surgery	12.6	18.4	7.6

Type of Surgical Procedure by Unknown CS Component Status



Summary

- Over two thirds of unknown stage cases had missing information on all three CS components across all registry groups
- 65% of unstaged cases did not receive cancer directed surgery which is much higher than known stage group (8.6%)
 - Low unknown stage registries had higher % of no surgery

Summary cont'd

- Registries with high % unknown stage cases had higher % of surgery performed (32.5%)
- The majority of unstaged colon cases with surgery performed had colectomy among unknown CS component groups

Conclusions

- No surgery is one of reasons that contribute to unknown stage
- High percentages of unknown stage cases with primary surgery performed for registries with high unknown stage cases indicates possible abstracting, consolidating, and coding issues

Conclusions cont'd

- Reasons cause colectomy cases with unknown stage could be:
 - No surgery pathology report
 - Surgical procedure was done in out of state or out of area facility
 - Consolidation issues at state registry level
 - ◆ Lack of proper text documentation: surgical pathology report/OP report documentation to extrapolate CS information
 - ◆ Lack of proper consolidation of CS codes from treating facility's abstract

Conclusions cont'd

- Registries need to further review unstaged colon cases with colectomies performed and identify reason(s) causing unknown staging