



A MULTIDISCIPLINE PROGRAM OF THE AMERICAN COLLEGE OF SURGEONS

# When Policy Affects Data

The Effect of CoC's Shift in Staging Requirements

Jerri Linn Phillips, M.A., C.T.R.  
National Cancer Data Base

© CoC 2010—Content cannot be reproduced or repurposed without written permission of the CoC.





A MULTIDISCIPLINE PROGRAM OF THE AMERICAN COLLEGE OF SURGEONS

## Brief History of CoC's Staging Requirements

- < 1990 – Gradual phase-in of AJCC staging
- 2004 – Managing physician must stage
- 2004 – CS implemented
  - *FORDS*: Registrars must copy physician stage
- 2008 – Major change in CoC requirements
  - CS serves function similar to pathologic staging
  - Programs monitor use of physician staging in treatment planning; dropped “copy” requirement
  - Clinical stage must be coded in abstract, staged by the registrar if not available from physician

© CoC 2010—Content cannot be reproduced or repurposed without written permission of the CoC.






A MULTIDISCIPLINE PROGRAM OF THE AMERICAN COLLEGE OF SURGEONS

## 2004 diagnoses: AJCC and CS compared

- **Unknown stage vs. known; General stage group vs. substage**
- **More unknown in the following situations:**
  - Physicians AJCC: cases for which staging would not affect treatment (0 and IV)
  - Physicians AJCC: information required beyond the pathology report (thyroid uses age, histology)
  - Registrars CS: instructions use terminology that registrars are not taught to interpret
  - Registrars CS: Information not in hospital record
- **Not many outright disagreements**

© CoC 2010—Content cannot be reproduced or repurposed without written permission of the CoC.





A MULTIDISCIPLINE PROGRAM OF THE AMERICAN COLLEGE OF SURGEONS

## Shifting from AJCC to CS in reports

- Which data items to display?
  - CS Derived stage
  - pStage
  - cStage
  - Combined pStage and cStage
  - Combined stage supplemented with CS
- Evaluation of effect of CoC staging rules
  - Completeness of staging
  - Role of person who assigns stage


© CoC 2010—Content cannot be reproduced or repurposed without written permission of the CoC.

  
 A MULTIDISCIPLINE PROGRAM OF THE AMERICAN COLLEGE OF SURGEONS

## 2009: Comparison among staging items

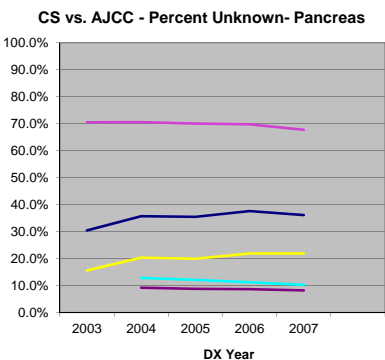
- Sites selected (2003 – 2007)
  - Breast
  - Pancreas
  - Prostate
  - Non-small cell lung carcinoma
  - Small cell lung carcinoma
  - Colon
  - Rectum
  - Ovary
- Evaluated
  - Completeness (percent unknown)
  - Distributions by selected registry items

© CoC 2010—Content cannot be reproduced or repurposed without written permission of the CoC.

  
 A MULTIDISCIPLINE PROGRAM OF THE AMERICAN COLLEGE OF SURGEONS

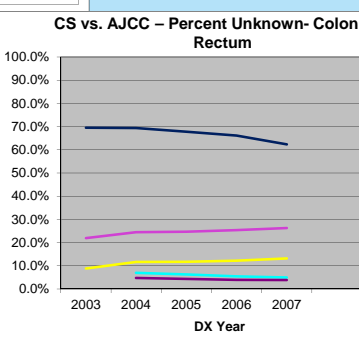
## Did CS implementation increase AJCC unknowns?

**CS vs. AJCC - Percent Unknown- Pancreas**



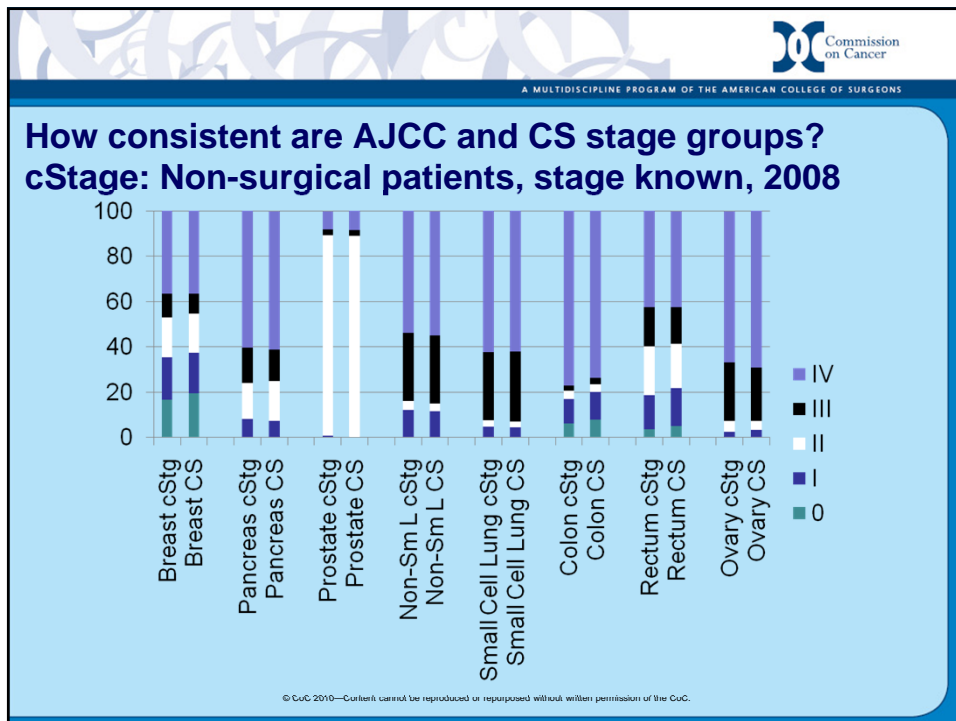
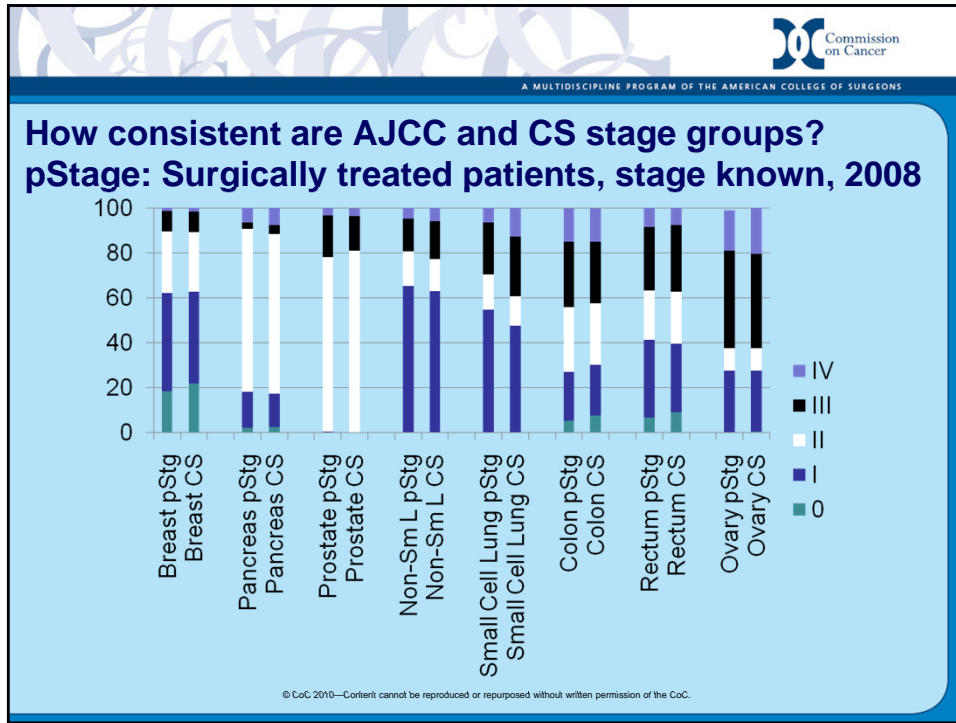
DX Year	cStage	pStage	Combined	CS Derv	Supple
2003	30%	70%	15%	10%	10%
2004	35%	70%	20%	10%	10%
2005	35%	70%	20%	10%	10%
2006	38%	70%	20%	10%	10%
2007	35%	68%	20%	10%	10%


**CS vs. AJCC – Percent Unknown- Colon and Rectum**



DX Year	cStage	pStage	Combined	CS Derv	Supple
2003	70%	25%	10%	5%	5%
2004	70%	25%	10%	5%	5%
2005	68%	25%	10%	5%	5%
2006	65%	25%	10%	5%	5%
2007	65%	25%	10%	5%	5%

© CoC 2010—Content cannot be reproduced or repurposed without written permission of the CoC.





  
A MULTIDISCIPLINE PROGRAM OF THE AMERICAN COLLEGE OF SURGEONS

### Effect of stage item choice on distribution of surgery

<b>Type of Breast Cancer Primary Site Surgery, 2007: Percent of Stage Group</b>									
Type of Surgery	Stage I		Stage II		Stage III		Stage IV		
	Comb	CS	Comb	CS	Comb	CS	Comb	CS	
<b>None</b>	1.6	1.6	3.1	3.3	6.7	5.8	62.2	61.2	
<b>Partial Mastectomy</b>	69.2	69.0	48.6	48.6	22.0	22.1	11.5	12.0	
<b>Simple Mastectomy</b>	19.5	19.8	23.3	23.0	17.7	17.9	7.0	7.1	
<b>Mod Radical Mastectomy</b>	8.5	8.4	23.2	23.2	50.9	51.6	15.8	16.0	
<b>Mastectomy, NOS</b>	0.2	0.2	0.5	0.4	0.6	0.6	0.3	0.3	
<b>Other Type of Surgery</b>	0.8	0.8	1.1	1.2	1.8	1.8	1.0	1.0	
<b>Unknown if Primary Surgery</b>	0.2	0.2	0.2	0.3	0.3	0.2	2.2	2.4	
	100	100	100	100	100	100	100	100	


© CoC 2010—Content cannot be reproduced or repurposed without written permission of the CoC.


  
A MULTIDISCIPLINE PROGRAM OF THE AMERICAN COLLEGE OF SURGEONS

### Effect of stage item choice on treatment modalities

<b>Pancreas Treatment Modalities, 2007: Percent of Stage Group</b>									
Treatment Modality	Stage I		Stage II		Stage III		Stage IV		
	Comb	CS	Comb	CS	Comb	CS	Comb	CS	
<b>Surgery Only</b>	22.6	22.8	17.4	16.6	2.5	2.6	1.5	1.5	
<b>Surgery + Chemotherapy</b>	6.1	6.1	12.1	11.6	1.8	2.1	1.2	1.3	
<b>Radiation + Chemotherapy</b>	8.4	8.5	10.3	11.1	34.1	32.7	3.9	4.0	
<b>Chemotherapy Only</b>	8.0	8.2	8.0	8.6	21.6	23.0	42.2	42.0	
<b>Surg + Rad + Chemo</b>	8.9	8.5	19.9	19.6	3.4	3.5	0.3	0.4	
<b>Other Combinations</b>	17.0	17.3	16.0	16.1	15.1	15.6	18.8	18.5	
<b>No 1<sup>st</sup> Course Treatment</b>	29.0	28.6	16.3	16.4	21.5	20.5	32.1	32.3	
	100	100	100	100	100	100	100	100	


© CoC 2010—Content cannot be reproduced or repurposed without written permission of the CoC.

  
A MULTIDISCIPLINE PROGRAM OF THE AMERICAN COLLEGE OF SURGEONS

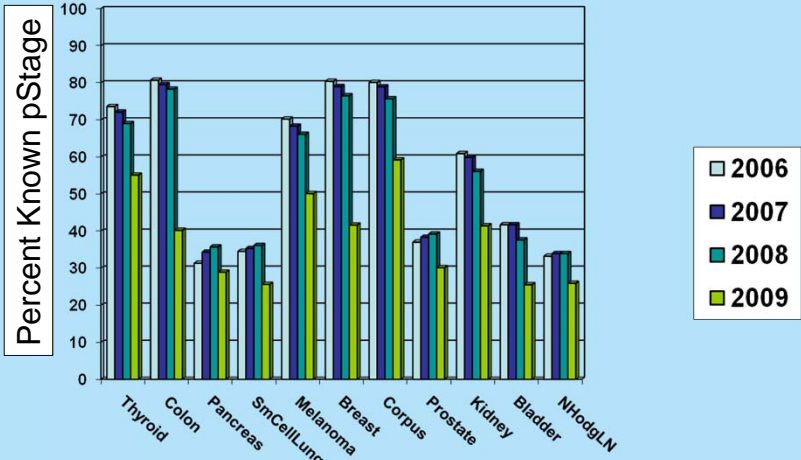
## 2011: What happened with rule change in 2008?

- Stageable cases from the 11 most frequent sites  
Diagnosis years 2006-2009
  - Thyroid
  - Colon
  - Exocrine Pancreas
  - Small Cell Lung Carcinoma
  - Melanoma of Skin
  - Breast
  - Corpus Uterus
  - Prostate
  - Kidney
  - Urinary Bladder
  - Non-Hodgkin Lymphoma of Lymph Nodes

© CoC 2010—Content cannot be reproduced or repurposed without written permission of the CoC.

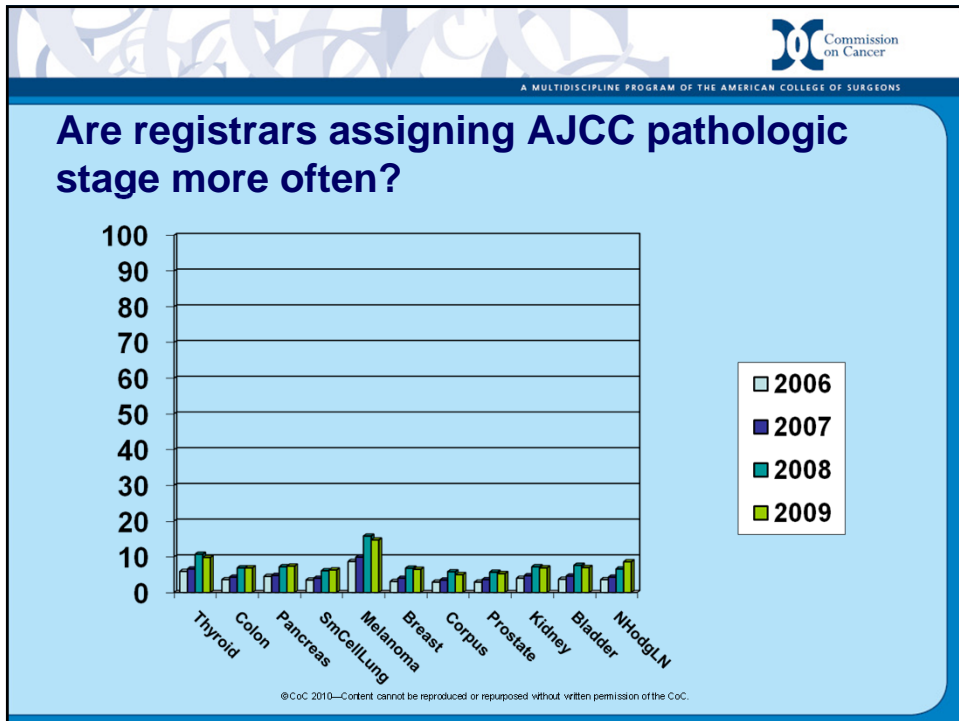
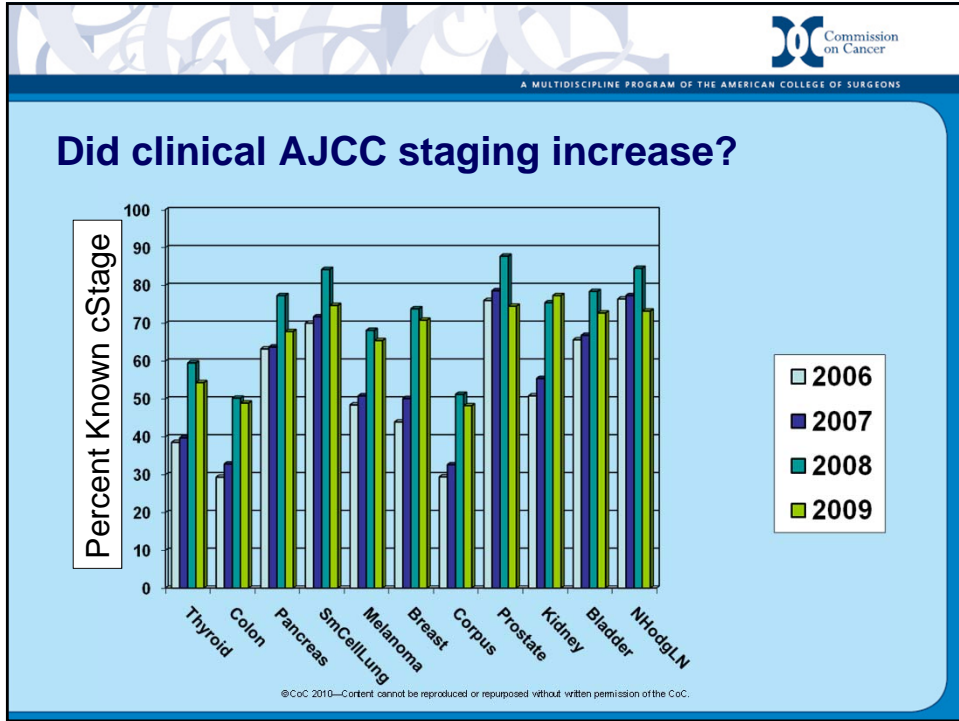
  
A MULTIDISCIPLINE PROGRAM OF THE AMERICAN COLLEGE OF SURGEONS

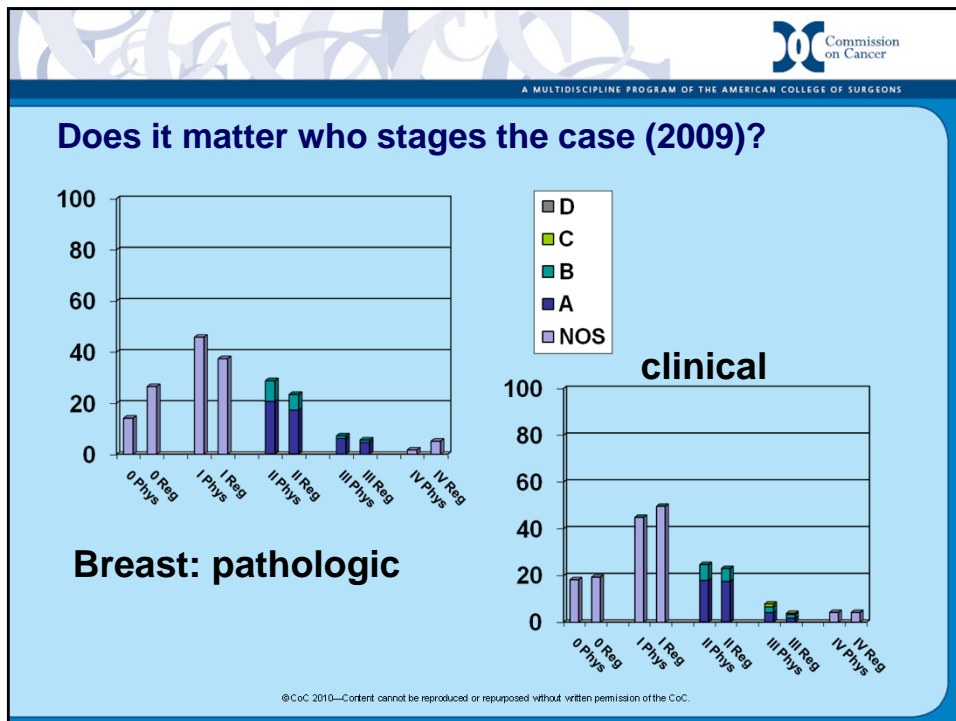
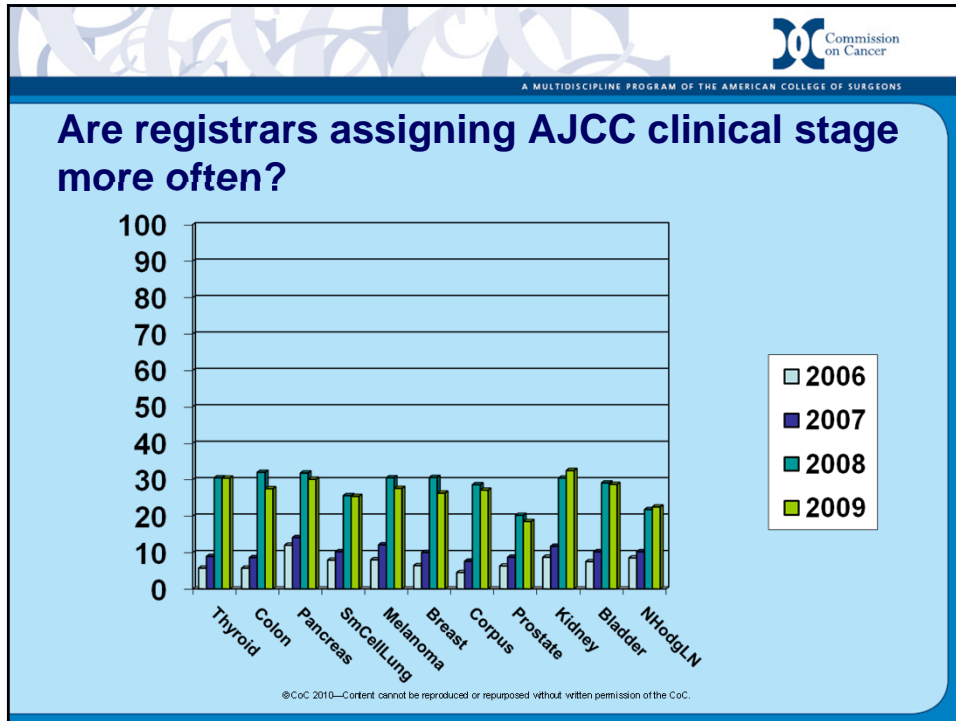
## Did pathologic AJCC staging decrease?



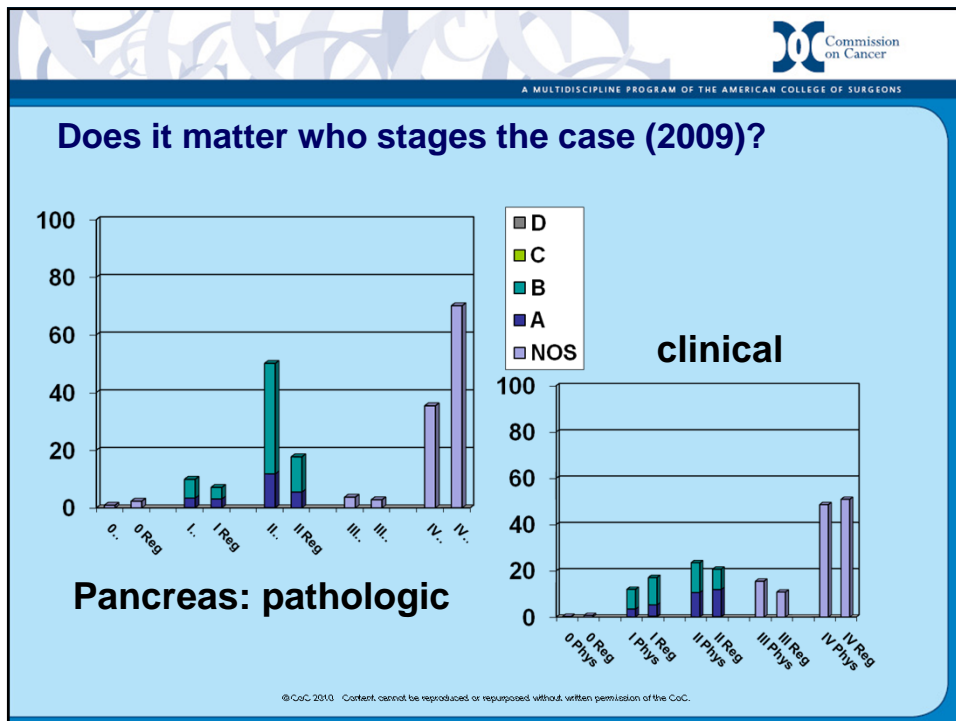
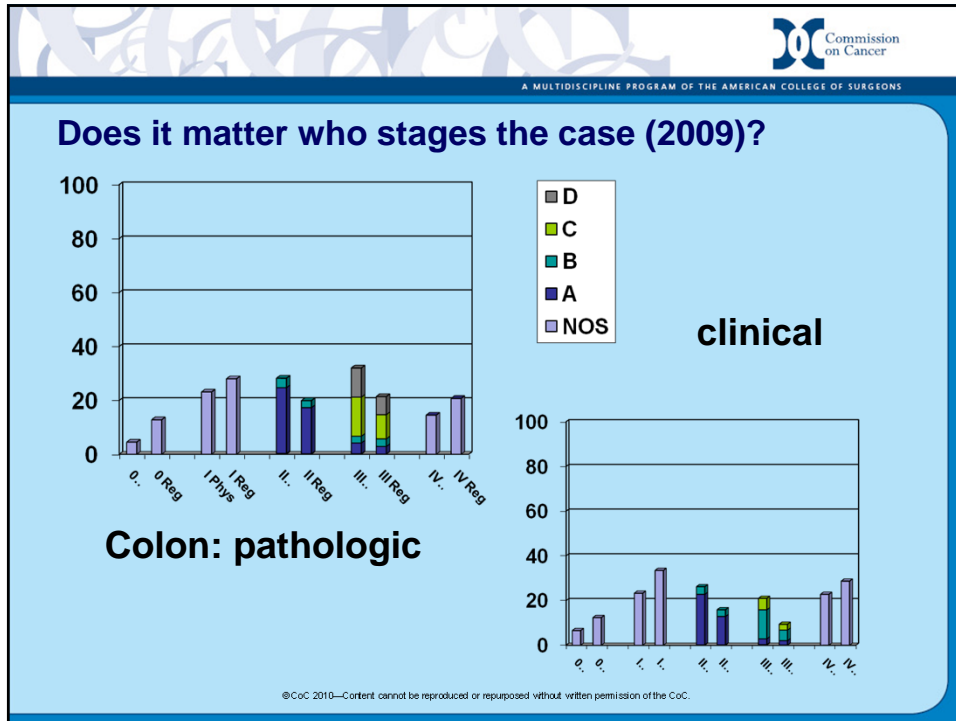
Cancer Site	2006	2007	2008	2009
Thyroid	75	72	70	55
Colon	82	80	78	40
Pancreas	35	33	32	28
SmCellLung	70	68	65	50
Melanoma	82	80	78	42
Breast	80	78	75	60
Corpus	38	36	35	30
Prostate	62	60	58	42
Kidney	42	40	38	25
Bladder	35	33	32	25
NHodgLN	35	33	32	25

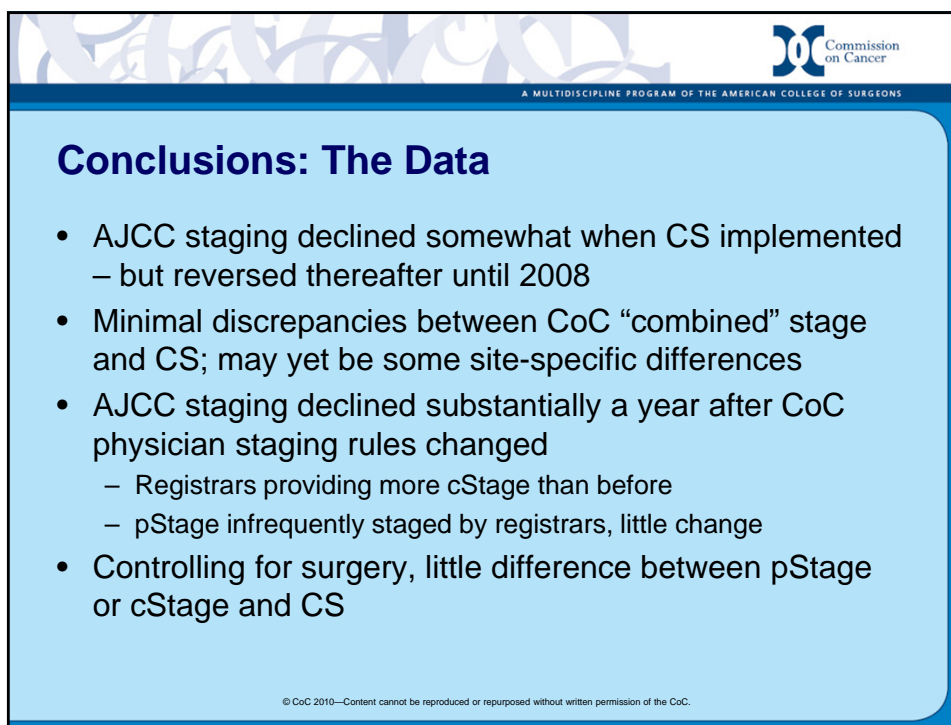
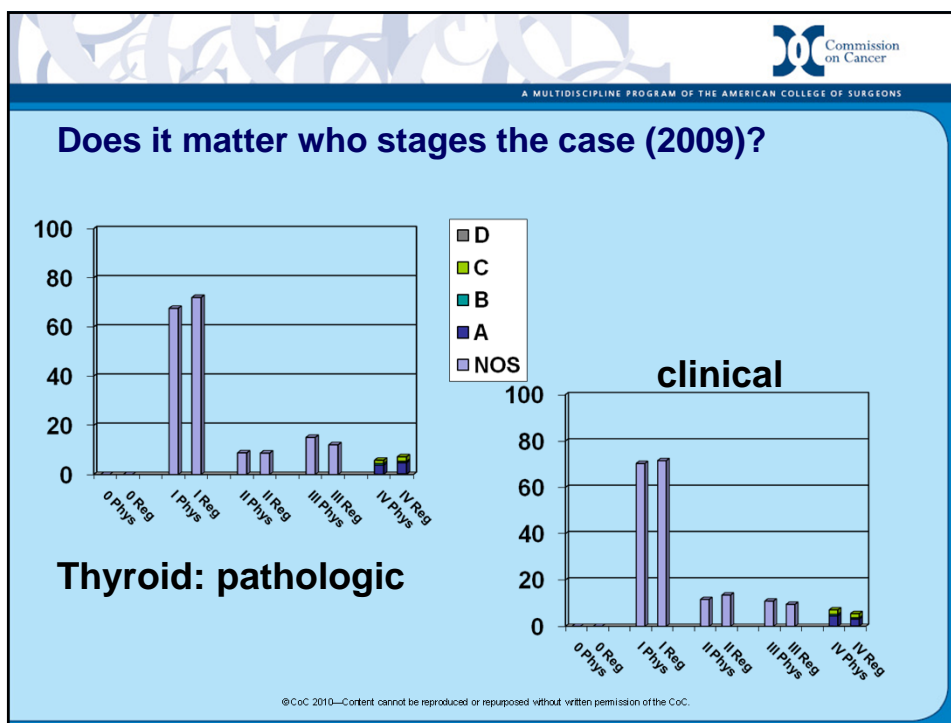
©CoC 2010—Content cannot be reproduced or repurposed without written permission of the CoC.











## Conclusions: NCDB Action

- If Combined Stage retained
  - Total number staged decreases
  - Relative mix of clinical and pathologic stage shifts
- NCDB will use CS for its routinely posted tables (2004+)
- NCDB will provide all measures (All CS and AJCC items) for its Participant User Files