

Site-Specific Comparison of Summary Stage 1977 and Summary Stage 2000 Coding

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Introduction

NAACCR has conducted two assessments of the summary stage coding changes that were introduced in 2000 to elucidate the impact that they would have on researcher use of the data in evaluation of time trends in stage of disease at diagnosis. The first study was a reabstract study that compared the differences in coding cancers of the breast and lung using both 1977 and 2000 rules. The results of this activity are provided in a report posted on the NAACCR web site.²

The second assessment uses data from the Surveillance, Epidemiology, and End Results (SEER) Program to examine selected site-specific impacts for the most common cancer types of all cases diagnosed in 1998-2001 where differences in indirect assignment to either a summary stage 1977 or a summary stage 2000 code would occur using the more detailed extent of disease coding system (EOD) as a basis for staging. Cases were indirectly coded to summary stage twice using EOD: once based on the 1977 rules and the second based on the 2000 rules. OD codes are not precise enough to capture all of the staging differences between summary stage 1977 and 2000. For example, for breast cancer no differences in stage distribution are observed when summary stage 1977 and summary stage 2000 are derived from EOD. However, a comparison of staging rules indicates that Infraclavicular lymph nodes were distant in SS77 and regional in SS2000. There isn't a separate code in EOD for infraclavicular lymph nodes; they are grouped with regional lymph nodes. Therefore, the infraclavicular nodes are converted to regional for both schemes even though they should be distant or SS77 and their impact can't be measured. There are some instances where EOD cannot be used to evaluate the complete impact of a change between SS77 and SS2000. The changes in stage distribution presented in this report represent minimum, measurable stage shifts. Cancer sites (breast and testis) for which no differences were observed between the two EOD-derived staging schemes are not presented.

The protocol of the assessment is described in greater detail on the next page. The results for each site are summarized in a table with stage distributions provided according to the 1977 and 2000 schemas; a graph of these results; and a summary kappa statistic, which compares the agreement beyond chance in the resulting proportional distributions. The NAACCR work group defined their interpretation based on the magnitude of the kappa statistic and the dispersion of the disagreement (e.g., whether it was across all stage groups or one or two groups and which stage groups disagreed).

Generally, a kappa statistic greater than 0.97 was interpreted to mean that the two methods produced similar results; a kappa statistic from 0.90 to 0.96 yielded a cautionary statement as a part of the interpretation of stage comparisons that span the two sets of coding rules; and a kappa value below 0.90 was interpreted that the two methods did not result in comparable data. Further, when the differences in the distributions involved more than one or two stage categories, the interpretation of comparability became more cautionary than the kappa statistic alone might suggest (see e.g., cancer of the sinus). This interpretation of the kappa statistic is more stringent than that recommended by Fleiss³ because of the impact that small differences, commonality of the site, and source of discrepancy will have on interpretation of data that are compared from both coding systems.

¹Dee West, Brenda Edwards, Maria Schymura, Barry Miller, Joellyn Ellison

²http://www.naaccr.org/index.asp?Col_SectionKey=11&Col_ContentID=52#Summary; last accessed 6/13/2005

³ Fleiss JL. Statistical Methods for Rates and Proportions. Second Edition. (NY):John Wiley and Sons, 1981.

Summary Stage 1977 and 2000 Comparison Protocol

1. Describe Summary Stage rule changes

Identify all rule changes that affect SS2000, using the following documents:

- a. *SS7700.counts.xls* file 1998-2001 provided by NCI.
 - b. NAACCR Report on Summary Stage: Data Effects of the Changes in 2000 (prepared by J. L. Phillips), Appendix A: Changes in Stage Code Assignment by Anatomic Site from SS1977 to SS2000 (see NAACCR website under Epidemiologic Reports).
2. Create the SS1977 and SS2000 Agreement Table. Run statistical test on the agreement and provide Kappa statistic. Construct the table using counts provided in the *SS7700.count.xls* file.
3. Compare the summary stage distributions using SS1977 and SS2000 staging schemes. These are the marginal totals of the Agreement Table described in Step 2. NCI provided the figures in the *SS7700.discrepancies.doc* file along with discrepancy rate.
4. Describe the stage shift, both in detail and major categories (L-R-D).
5. The group will discuss and develop a consensus on data interpretation.

Base of Tongue, Lingual Tonsil (C01.9 and C02.4)

A. Summary Stage Rule Changes

1. Involvement in soft palate, inferior surface, NOS.
Distant (SS1977) to Regional Extension (SS2000)

B. Stage Shift

<u>Stage</u>	<u>SS 1977</u>		<u>SS 2000</u>	
Localized	15.0%		15.0%	
Regional-Ext	12.1%	} 63.8%	12.2%	} 63.9%
Regional-Node	25.2%		25.3%	
Reg-Ext + Node	26.5%		26.4%	
Distant	15.6%		15.6%	
Unknown	5.6%		5.5%	
Total	100.0%		100.0%	

C. Data Interpretation

The distribution of Summary Stage 1977 and Summary Stage 2000 is very similar. However, individual cases may be classified differently according to the two systems and thus for some uses, this impact should be reviewed for comparability.

Indirect Coding to Summary Stage 1977 and Summary Stage 2000 based on Extent of Disease Codes
SEER Program Data, 1998-2001, Base of Tongue and Lingual Tonsil

ss1977

ss2000

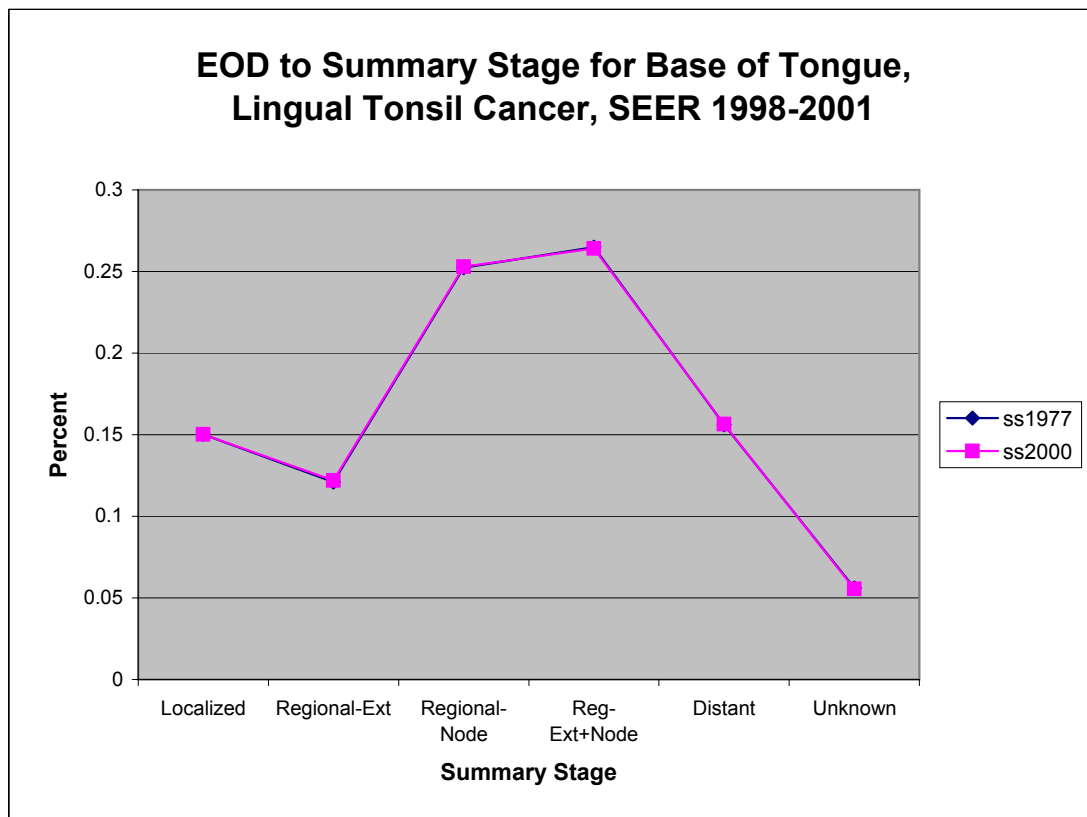
	0: In Situ	1: Localize	2: Regiona	3: Reg LN	4: Reg + L	5: Reg, no	7: Distant	9: Unknow	Total
1: Localized		241	0	0	0	0	0	0	241
2: Regional			195	0	0	0	0	0	195
3: Reg LN		0	0	405	0	0	0	0	405
4: Reg + LN		0	0	0	424	0	1	0	425
5: Reg, nos		0	0	0	0	0	0	0	0
7: Distant		0	0	0	0	0	250	0	250
9: Unknown		0	1	1	0	0	0	88	90
Total		241	196	406	424	0	251	88	1606

Proportion:	0: In Situ	1: Localize	2: Regiona	3: Reg LN	4: Reg + L	5: Reg, no	7: Distant	9: Unknow	Total
1: Localized		0.150062	0	0	0	0	0	0	0.150062
2: Regional		0	0.12142	0	0	0	0	0	0.12142
3: Reg LN		0	0	0.252179	0	0	0	0	0.252179
4: Reg + LN		0	0	0	0.26401	0	0.000623	0	0.264633
5: Reg, nos		0	0	0	0	0	0	0	0
7: Distant		0	0	0	0	0	0.155666	0	0.155666
9: Unknown		0	0.000623	0.000623	0	0	0	0.054795	0.05604
Total		0.150062	0.122042	0.252802	0.26401	0	0.156289	0.054795	1

p_0 0.998132

p_e 0.198354

K 0.99767



Anterior 2/3 of Tongue, Tip, Border, and Tongue NOS (C02.0-02.3, C02.8, C02.9)

A. Summary Stage Rule Changes

1. Involvement in lateral pharyngeal wall, soft palate, inferior surface, and tonsils.
Distant (SS1977) to Regional Extension (SS2000)
2. Involvement in mandible.
Regional (SS1977) to Distant (SS2000)

B. Stage Shift

<u>Stage</u>	<u>SS 1977</u>	<u>SS 2000</u>
Localized	60.4%	60.4%
Regional-Ext	5.0%	6.5%
Regional-Node	12.7%	12.7%
Reg-Ext + Node	4.8%	7.0%
Distant	11.3%	7.7%
Unknown	5.7%	5.7%
Total	100.0%	100.0%

C. Data Interpretation

Summary Stage 2000 is not entirely compatible with Summary Stage 1977 codes. The change in rules results in cases shifting from distant stage to regional stage in SS2000.

Indirect Coding to Summary Stage 1977 and Summary Stage 2000 based on Extent of Disease Codes
SEER Program Data, 1998-2001, Anterior Tongue, Tip, Border and Tongue NOS

ss1977

ss2000

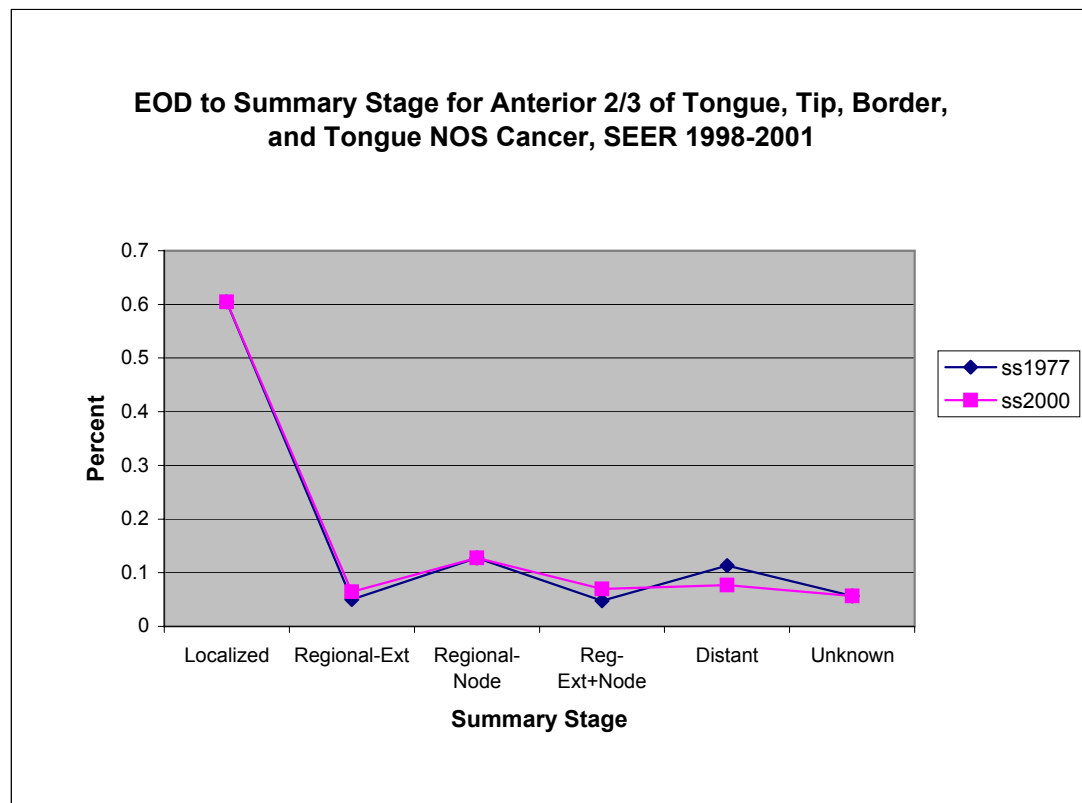
	0: In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	5: Reg, nos	7: Distant	9: Unknown	Total
1: Localized		1215	0	0	0	0	0	0	1215
2: Regional		0	101	0	0	0	0	0	101
3: Reg LN		0	0	256	0	0	0	0	256
4: Reg + LN		0	0	0	96	0	0	0	96
5: Reg, nos		0	0	0	0	0	0	0	0
7: Distant		0	29	0	44	0	155	0	228
9: Unknown		0	0	0	0	0	0	114	114
Total		1215	130	256	140	0	155	114	2010

Proportion:	0: In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	5: Reg, nos	7: Distant	9: Unknown	Total
1: Localized		0.604478	0	0	0	0	0	0	0.604478
2: Regional		0	0.050249	0	0	0	0	0	0.050249
3: Reg LN		0	0	0.127363	0	0	0	0	0.127363
4: Reg + LN		0	0	0	0.047761	0	0	0	0.047761
5: Reg, nos		0	0	0	0	0	0	0	0
7: Distant		0	0.014428	0	0.021891	0	0.077114	0	0.113433
9: Unknown		0	0	0	0	0	0	0.056716	0.056716
Total		0.604478	0.064677	0.127363	0.069652	0	0.077114	0.056716	1

p_0 0.963681592

p_e 0.400155194

K 0.939453659



Cheek (Buccal) Mucosa, Vestibule (C06.0, C06.1)

A. Summary Stage Rule Changes

1. Involvement in musculature (buccinator).
Regional (SS1977) to Localized (SS2000)
2. Involvement in skin of cheek.
Regional (SS1977) to Distant (SS2000)

B. Stage Shift

<u>Stage</u>	<u>SS 1977</u>	<u>SS 2000</u>
Localized	44.1%	54.3%
Regional-Ext	20.0%	8.0%
Regional-Node	5.3%	6.4%
Reg-Ext + Node	7.1%	3.7%
Distant	15.2%	19.3%
Unknown	8.3%	8.3%
Total	100.0%	100.0%

32.4%

18.1%

Data Interpretation

Summary Stage 2000 is not compatible with Summary Stage 1977 codes.

Indirect Coding to Summary Stage 1977 and Summary Stage 2000 based on Extent of Disease Codes
SEER Program Data, 1998-2001, Cheek, Mucosa, Vestibule

ss1977

ss2000

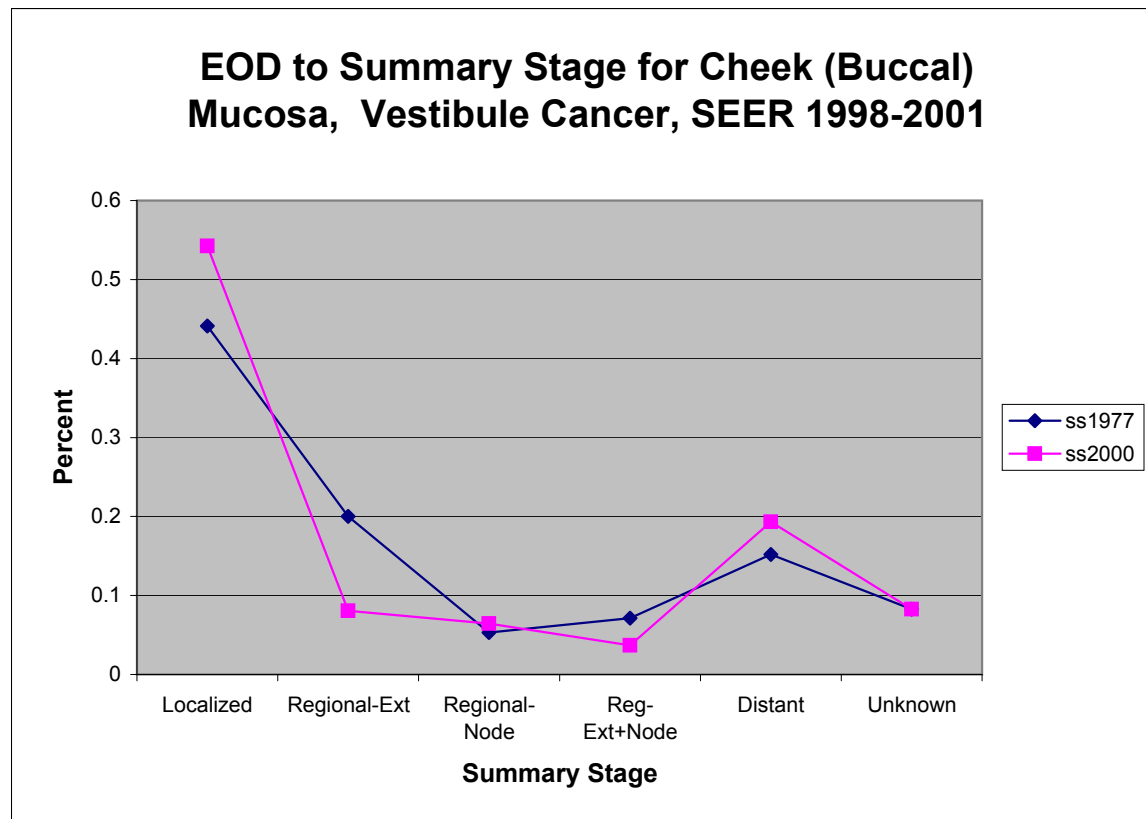
	0: In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	5: Reg, nos	7: Distant	9: Unknown	Total
1: Localized		192	0	0	0	0	0	0	192
2: Regional		44	35	0	0	0	8	0	87
3: Reg LN		0	0	23	0	0	0	0	23
4: Reg + LN		0	0	5	16	0	10	0	31
5: Reg, nos		0	0	0	0	0	0	0	0
7: Distant		0	0	0	0	0	66	0	66
9: Unknown		0	0	0	0	0	0	36	36
Total		236	35	28	16	0	84	36	435

Proportion:	0: In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	5: Reg, nos	7: Distant	9: Unknown	Total
1: Localized		0.441379	0	0	0	0	0	0	0.441379
2: Regional		0.101149	0.08046	0	0	0	0.018391	0	0.2
3: Reg LN		0	0	0.052874	0	0	0	0	0.052874
4: Reg + LN		0	0	0.011494	0.036782	0	0.022989	0	0.071264
5: Reg, nos		0	0	0	0	0	0	0	0
7: Distant		0	0	0	0	0	0.151724	0	0.151724
9: Unknown		0	0	0	0	0	0	0.082759	0.082759
Total		0.542529	0.08046	0.064368	0.036782	0	0.193103	0.082759	1

p_0 0.845977011

p_e 0.297724931

K 0.780679971



Parotid Gland, Other Major Salivary Glands (C07.9, C08.1, C08.2, C08.8, C08.9)

A. Summary Stage Rule Changes

Involvement in base of skull, skull, NOS, or spinal accessory nerve.
Regional (SS1977) to Distant (SS2000)

B. Stage Shift

<u>Stage</u>	<u>SS 1977</u>	<u>SS 2000</u>
Localized	47.7%	47.7%
Regional-Ext	14.3%	13.3%
Regional-Node	8.7%	8.7%
Reg-Ext + Node	10.5%	9.5%
Distant	12.4%	14.3%
Unknown	6.5%	6.5%
Total	100.0%	100.0%

Data Interpretation

The distribution of summary stage 1977 and summary stage 2000 codes is very similar. However, individual cases may be classified differently according to the two systems, and thus for some uses, this impact should be reviewed before concluding comparability.

Indirect Coding to Summary Stage 1977 and Summary Stage 2000 based on Extent of Disease Codes
SEER Program Data, 1998-2001, Parotid Gland, Other Major Salivary Glands

ss1977

ss2000

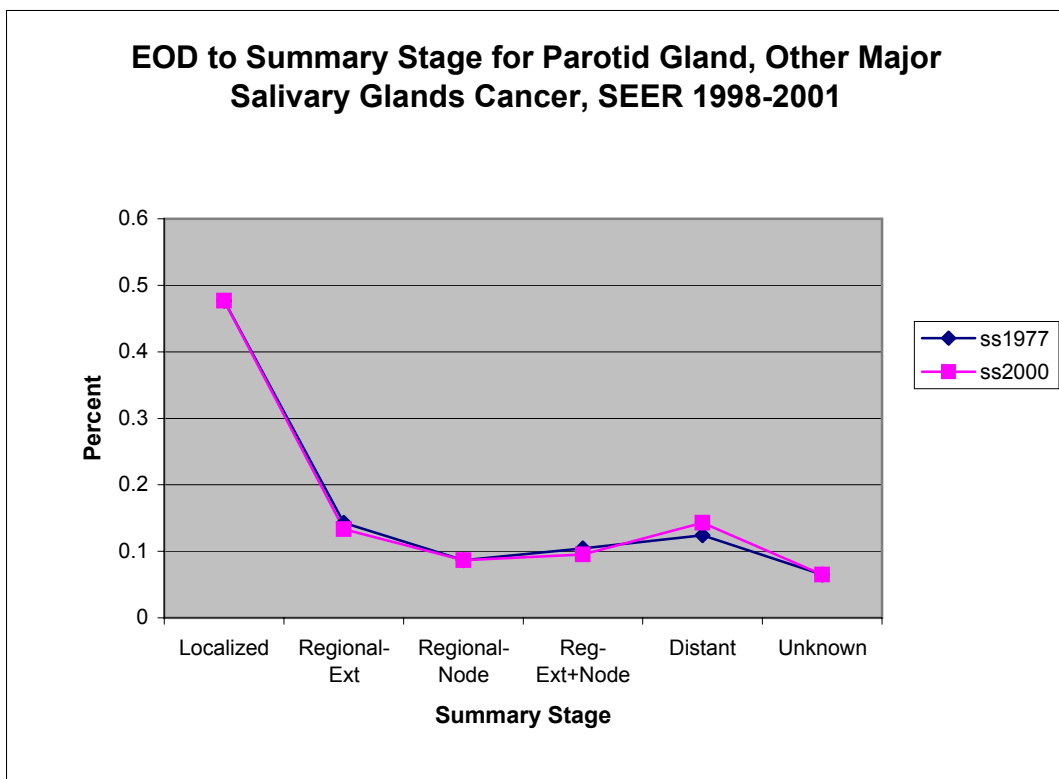
	0: In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	5: Reg, nos	7: Distant	9: Unknown	Total
1: Localized		807	0	0	0	0	0	0	807
2: Regional		0	226	0	0	0	16	0	242
3: Reg LN		0	0	147	0	0	0	0	147
4: Reg + LN		0	0	5	161	0	16	0	177
5: Reg, nos		0	0	0	0	0	0	0	0
7: Distant		0	0	0	0	0	210	0	210
9: Unknown		0	0	0	0	0	0	110	110
Total		807	226	147	161	0	242	110	1693

Proportion:	0: In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	5: Reg, nos	7: Distant	9: Unknown	Total
1: Localized		0.476669	0	0	0	0	0	0	0.476669
2: Regional		0	0.133491	0	0	0	0.009451	0	0.142942
3: Reg LN		0	0	0.086828	0	0	0	0	0.086828
4: Reg + LN		0	0	0.002953	0.095097	0	0.009451	0	0.104548
5: Reg, nos		0	0	0	0	0	0	0	0
7: Distant		0	0	0	0	0	0.12404	0	0.12404
9: Unknown		0	0	0	0	0	0	0.064973	0.064973
Total		0.476669	0.133491	0.086828	0.095097	0	0.142942	0.064973	1

p_0 0.981098641

p_e 0.285727793

K 0.973537598



Nasopharynx (C11.0-11.3, C11.8, C11.9)

A. Summary Stage Rule Changes

1. Involvement in hard palate.
Distant (SS1977) to Regional Extension (SS2000)
2. Involvement in paranasal sinus, submandibular (submaxillary) nodes, or submental nodes.
Distant (SS1977) to Regional Lymph Nodes (SS2000)

B. Stage Shift

<u>Stage</u>	<u>SS 1977</u>	<u>SS 2000</u>
Localized	14.4%	14.4%
Regional-Ext	12.7%	12.8%
Regional-Node	20.0%	20.0%
Reg-Ext + Node	17.6%	17.8%
Distant	23.7%	23.4%
Unknown	11.6%	11.6%
Total	100.0%	100.0%

50.3%

50.6%

Data Interpretation

The distribution of summary stage 1977 and summary stage 2000 codes is very similar. However, individual cases may be classified differently according to the two systems, and thus for some uses, this impact should be reviewed for comparability.

Indirect Coding to Summary Stage 1977 and Summary Stage 2000 based on Extent of Disease Codes
SEER Program Data, 1998-2001, Nasopharynx

ss1977

ss2000

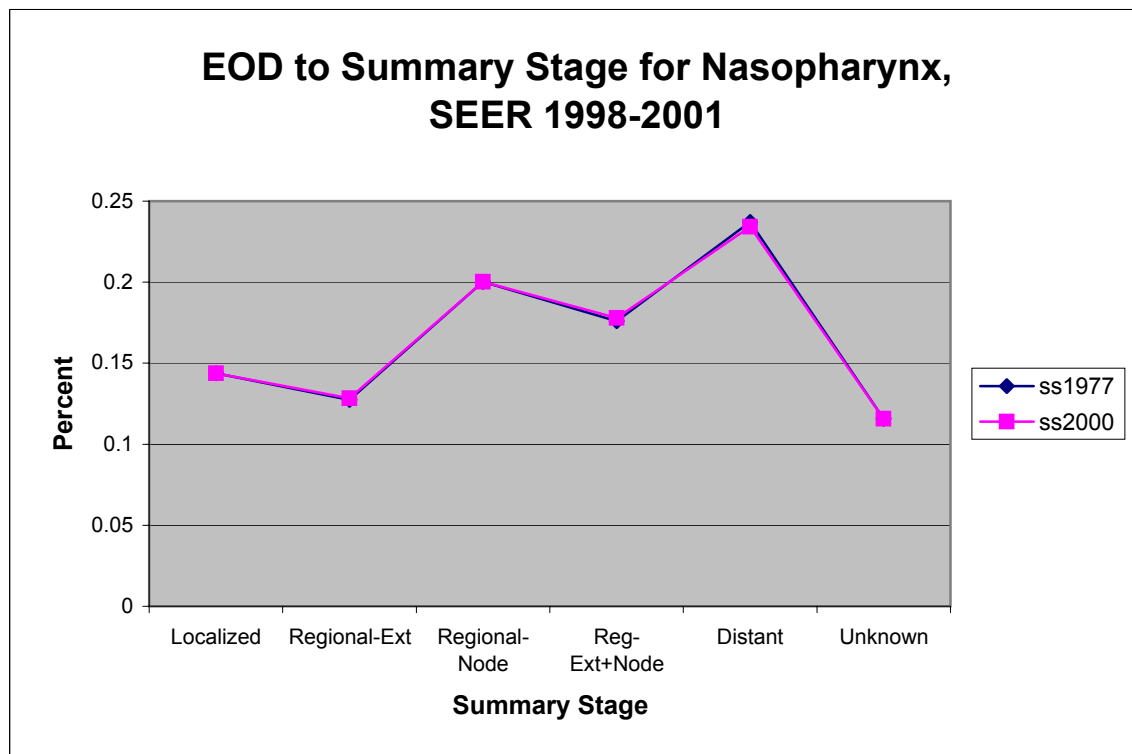
	0: In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	5: Reg, nos	7: Distant	9: Unknown	Total
1: Localized		148	0	0	0	0	0	0	148
2: Regional		0	131	0	0	0	0	0	131
3: Reg LN		0	0	206	0	0	0	0	206
4: Reg + LN		0	0	0	181	0	0	0	181
5: Reg, nos		0	0	0	0	0	0	0	0
7: Distant		0	1	0	2	0	241	0	244
9: Unknown		0	0	0	0	0	0	119	119
Total		148	132	206	183	0	241	119	1029

Proportion:	0: In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	5: Reg, nos	7: Distant	9: Unknown	Total
1: Localized		0.143829	0	0	0	0	0	0	0.143829
2: Regional		0	0.127308	0	0	0	0	0	0.127308
3: Reg LN		0	0	0.200194	0	0	0	0	0.200194
4: Reg + LN		0	0	0	0.175899	0	0	0	0.175899
5: Reg, nos		0	0	0	0	0	0	0	0
7: Distant		0	0.000972	0	0.001944	0	0.234208	0	0.237123
9: Unknown		0	0	0	0	0	0	0.115646	0.115646
Total		0.143829	0.12828	0.200194	0.177843	0	0.234208	0.115646	1

p_0 0.997084548

p_e 0.177288186

K 0.99645629



Pyriform Sinus, Hypopharynx, Laryngopharynx (C12.9, C13.0-13.2, C13.8, C13.9)

A. Summary Stage Rule Changes

1. Involvement in carotid artery, cricoid cartilage, thyroid cartilage, or thyroid gland.
Distant (SS1977) to Regional Extension (SS2000)
2. Involvement in submandibular (submaxillary) nodes, submental nodes, parapharyngeal nodes, paratracheal nodes, recurrent pharyngeal nerve chain, prelaryngeal nodes, or Delphian node.
Distant (SS1977) to Regional Lymph Nodes (SS2000)

B. Stage Shift

<u>Stage</u>	<u>SS 1977</u>	<u>SS 2000</u>
Localized	16.7%	16.7%
Regional-Ext	16.4%	17.6%
Regional-Node	18.2%	18.2%
Reg-Ext + Node	29.2%	32.2%
Distant	13.6%	9.4%
Unknown	5.9%	5.9%
Total	100.0%	100.0%

63.8%

16.4%
18.2%
29.2%

68.0%

17.6%
18.2%
32.2%

Data Interpretation

Summary Stage 2000 is not compatible with Summary Stage 1977 codes.

Indirect Coding to Summary Stage 1977 and Summary Stage 2000 based on Extent of Disease Codes
SEER Program Data, 1998-2001, Pyriform Sinus, Hypopharynx, and Laryngopharynx

ss1977

ss2000

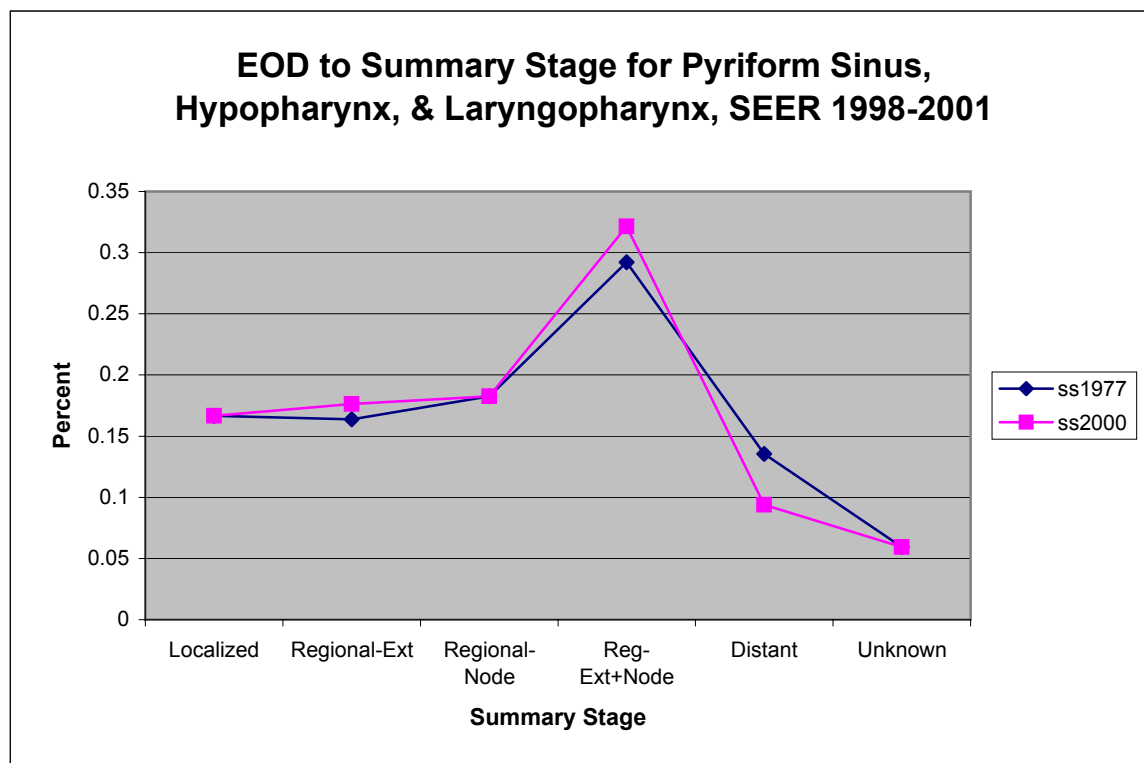
	0: In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	5: Reg, nos	7: Distant	9: Unknown	Total
1: Localized		188	0	0	0	0	0	0	188
2: Regional		0	185	0	0	0	0	0	185
3: Reg LN		0	0	206	0	0	0	0	206
4: Reg + LN		0	0	0	330	0	0	0	330
5: Reg, nos		0	0	0	0	0	0	0	0
7: Distant		0	14	0	33	0	106	0	153
9: Unknown		0	0	0	0	0	0	67	67
Total		188	199	206	363	0	106	67	1129

Proportion:	0: In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	5: Reg, nos	7: Distant	9: Unknown	Total
1: Localized		0.166519	0	0	0	0	0	0	0.166519
2: Regional		0	0.163862	0	0	0	0	0	0.163862
3: Reg LN		0	0	0.182462	0	0	0	0	0.182462
4: Reg + LN		0	0	0	0.292294	0	0	0	0.292294
5: Reg, nos		0	0	0	0	0	0	0	0
7: Distant		0	0.0124	0	0.029229	0	0.093888	0	0.135518
9: Unknown		0	0	0	0	0	0	0.059345	0.059345
Total		0.166519	0.176262	0.182462	0.321523	0	0.093888	0.059345	1

p_0 0.958370239

p_e 0.200128507

K 0.947954439



Esophagus (C 15)

1 Summary Stage Rule Changes

1. Cervical esophagus (C15.0), involving scalene (inferior deep cervical) lymph nodes.
Distant (SS1977) to Regional Lymph Node (SS2000)
2. Cervical esophagus (C15.0), involving supraclavicular (transverse cervical) lymph node.
Distant (SS1977) to Regional Lymph Node (SS2000)
3. Thoracic/middle esophagus (C15.1, C15.4) involving pericardial lymph nodes.
Regional Lymph Node (SS1977) to Distant (SS2000)

2 Stage Shift

The changes in 2000 summary stage scheme are minimal for esophageal cancer and have very little impact in stage shift.

<u>Stage</u>	<u>SS 1977</u>		<u>SS 2000</u>	
Localized	25.1%		25.1%	
Regional-Ext	12.1%	} 27.8%	12.1%	} 27.6%
Regional-Node	4.9%		4.9%	
Reg-Ext + Node	10.8%		10.6%	
Distant	28.2%		27.9%	
Unknown	19.2%		19.3%	
Total	100.0%		100.0%	

C. Data Interpretation

The distribution of summary stage 1977 and summary stage 2000 codes is very similar. However, individual cases may be classified differently according to the two systems, and thus for some uses, this impact should be reviewed for comparability.

Indirect Coding to Summary Stage 1977 and Summary Stage 2000 based on Extent of Disease Codes
SEER Program Data, 1998-2001, Esophagus

ss1977

ss2000

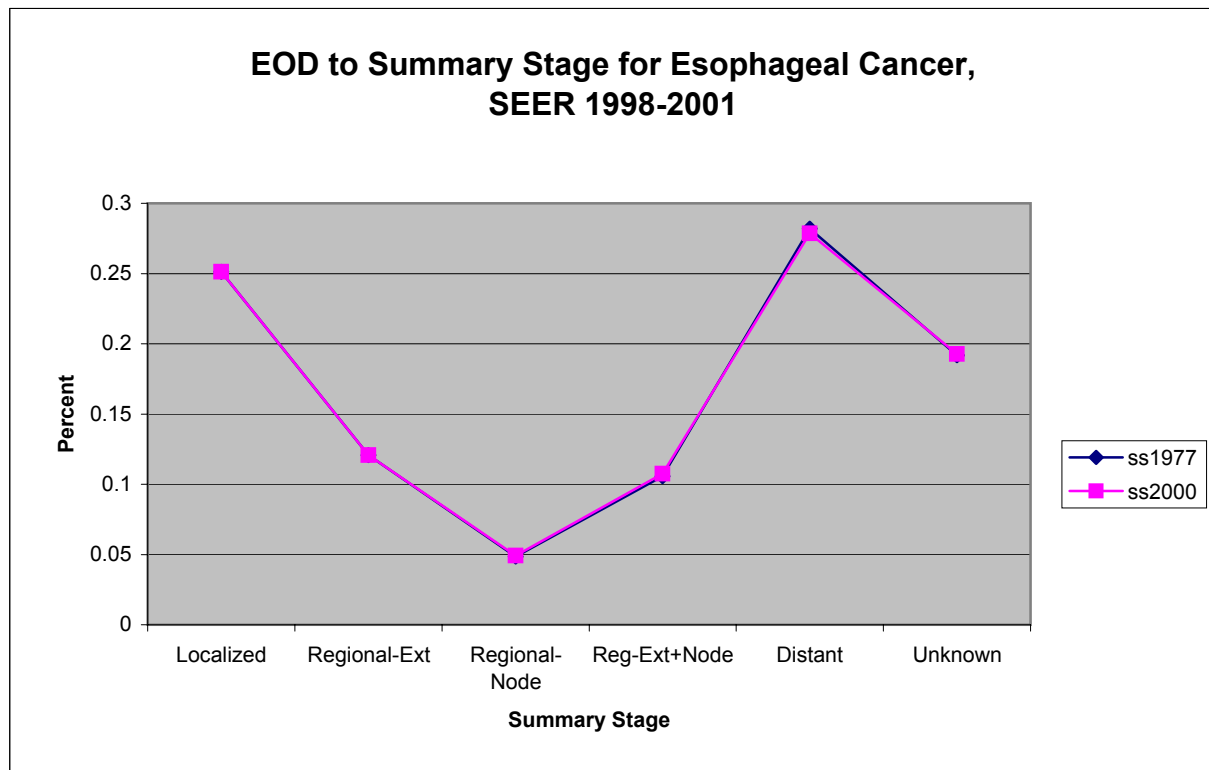
	0: In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	5: Reg, nos	7: Distant	9: Unknown	Total
1: Localized		1589	0	0	0	0	0	0	1589
2: Regional		0	764	0	0	0	0	0	764
3: Reg LN		0	0	307	0	0	0	0	307
4: Reg + LN		0	0	0	669	0	0	0	669
5: Reg, nos		0	0	0	0	0	0	0	0
7: Distant		0	0	4	11	0	1762	6	1783
9: Unknown		0	0	0	0	0	0	1213	1213
Total		1589	764	311	680	0	1762	1219	6325

Proportion:	0: In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	5: Reg, nos	7: Distant	9: Unknown	Total
1: Localized		0.251225	0	0	0	0	0	0	0.251225
2: Regional		0	0.120791	0	0	0	0	0	0.120791
3: Reg LN		0	0	0.048538	0	0	0	0	0.048538
4: Reg + LN		0	0	0	0.105771	0	0	0	0.105771
5: Reg, nos		0	0	0	0	0	0	0	0
7: Distant		0	0	0.000632	0.001739	0	0.278577	0.000949	0.281897
9: Unknown		0	0	0	0	0	0	0.191779	0.191779
Total		0.251225	0.120791	0.04917	0.10751	0	0.278577	0.192727	1

p0 0.99668

pe 0.20695

K 0.99581



Stomach (C 16)

A. Summary Stage Rule Changes

1. Any subsite of stomach (C16.0-C16.6, C16.8-C16.9) with intraluminal spread (only) to esophagus or duodenum.
Regional Extension (SS1977) to Localized (SS2000)
2. Any subsite of stomach (C16.0-C16.6, C16.8-C16.9) with linitis plastica (diffuse involvement of the entire stomach wall).
Regional Extension (SS1977) to Localized (SS2000)
3. Any subsite of stomach (C16.0-C16.6, C16.8-C16.9) involving celiac or hepatic lymph nodes.
Distant (SS1977) to Regional Lymph Node (SS2000)

B. Stage Shift

<u>Stage</u>	<u>SS 1977</u>	<u>SS 2000</u>
Localized	23.3%	23.3%
Regional-Ext	7.0%	7.0%
Regional-Node	9.2%	9.8%
Reg-Ext + Node	13.1%	14.1%
Distant	33.7%	31.9%
Unknown	13.7%	13.8%
Total	100.0%	100.0%

29.3%

30.9%

Data Interpretation

The distribution of Summary Stage 1977 and Summary Stage 2000 codes is very similar. However, individual cases may be classified differently according to the two systems, and thus for some uses, this impact should be reviewed for comparability.

Indirect Coding to Summary Stage 1977 and Summary Stage 2000 based on Extent of Disease Codes
SEER Program Data, 1998-2001, Stomach

ss1977

ss2000

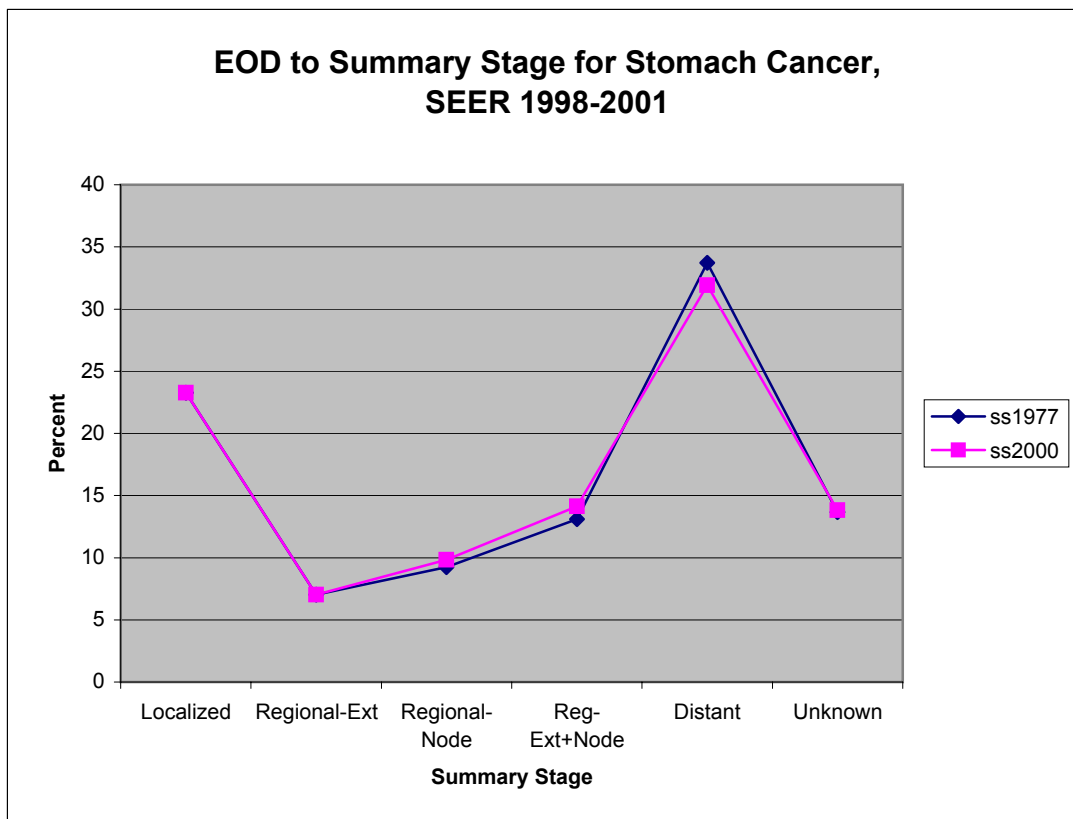
	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	7: Distant	9: Unknown	Total
1: Localized	2858	0	0	0	0	0	2858
2: Regional	0	864	0	0	0	0	864
3: Reg LN	0	0	1135	0	0	0	1135
4: Reg + LN	0	0	0	1609	0	0	1609
7: Distant	0	0	72	129	3923	20	4144
9: Unknown	0	0	0	0	0	1678	1678
Total	2858	864	1207	1738	3923	1698	12288

Proportions	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	7: Distant	9: Unknown	Total
1: Localized	0.232585	0	0	0	0	0	0.232585
2: Regional	0	0.070313	0	0	0	0	0.070313
3: Reg LN	0	0	0.092367	0	0	0	0.092367
4: Reg + LN	0	0	0	0.130941	0	0	0.130941
7: Distant	0	0	0.005859	0.010498	0.319255	0.001628	0.33724
9: Unknown	0	0	0	0	0	0.136556	0.136556
Total	0.232585	0.070313	0.098226	0.141439	0.319255	0.138184	1

p0 0.982

pe 0.213

K 0.977



Small Intestine (C17.0-17.3, C17.8-17.9)

A. Summary Stage Rule Changes

1. Involvement in mesothelium, serosa, tunica serosa, and visceral peritoneum.
Localized (SS1977) to Regional Extension (SS2000)
2. Involvement in superior mesenteric lymph nodes.
Distant (SS1977) to Regional Lymph Node (SS2000)

B. Stage Shift

<u>Stage</u>	<u>SS 1977</u>	<u>SS 2000</u>
Localized	32.7%	29.8%
Regional-Ext	11.6%	14.5%
Regional-Node	10.7%	9.1%
Reg-Ext + Node	9.4%	12.1%
Distant	28.0%	26.9%
Unknown	7.6%	7.6%
Total	100.0%	100.0%

Summary of Stage Shift Data:

Category	SS 1977 (%)	SS 2000 (%)
Localized	32.7%	29.8%
Regional-Ext	11.6%	14.5%
Regional-Node	10.7%	9.1%
Reg-Ext + Node	9.4%	12.1%
Distant	28.0%	26.9%
Unknown	7.6%	7.6%
Total	100.0%	100.0%

Grouped Data (Regional-Ext + Regional-Node):

Category	SS 1977 (%)	SS 2000 (%)
Regional-Ext + Regional-Node	31.7%	35.7%

C. Data Interpretation

Summary Stage 2000 is not entirely compatible with Summary Stage 1977 codes.
The change from distant stage regional subcodes in SS2000.

Indirect Coding to Summary Stage 1977 and Summary Stage 2000 based on Extent of Disease Codes
SEER Program Data, 1998-2001, Small Intestine

ss1977

ss2000

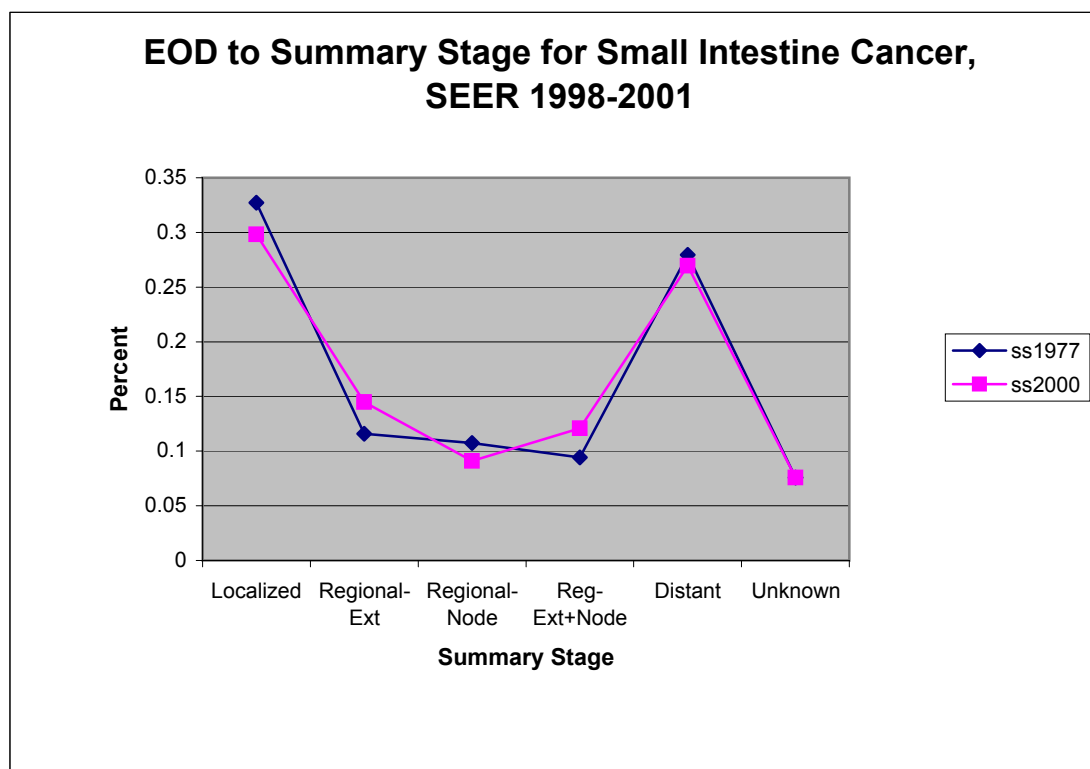
	0: In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	5: Reg, nos	7: Distant	9: Unknown	Total
1: Localized		708	69	0	0	0	0	0	777
2: Regional		0	275	0	0	0	0	0	275
3: Reg LN		0	0	207	48	0	0	0	255
4: Reg + LN		0	0	0	224	0	0	0	224
5: Reg, nos		0	0	0	0	0	0	0	0
7: Distant		0	0	9	15	0	640	0	664
9: Unknown		0	0	0	0	0	0	180	180
Total		708	344	216	287	0	640	180	2375

Proportion:	0: In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	5: Reg, nos	7: Distant	9: Unknown	Total
1: Localized		0.298105	0.029053	0	0	0	0	0	0.327158
2: Regional		0	0.115789	0	0	0	0	0	0.115789
3: Reg LN		0	0	0.087158	0.020211	0	0	0	0.107368
4: Reg + LN		0	0	0	0.094316	0	0	0	0.094316
5: Reg, nos		0	0	0	0	0	0	0	0
7: Distant		0	0	0.003789	0.006316	0	0.269474	0	0.279579
9: Unknown		0	0	0	0	0	0	0.075789	0.075789
Total		0.298105	0.144842	0.090947	0.120842	0	0.269474	0.075789	1

p_0 0.940631579

p_e 0.216544089

K 0.924222384



Liver and Intrahepatic Bile Ducts (C22.0, C22.1)

A. Summary Stage Rule Changes

1. Involvement in multiple nodules/tumors in more than one lobe or on surface of parenchyma, or satellite nodules, NOS.
Distant (SS1977) to Regional Extension (SS2000)
2. Involvement in cardiac nodes, coronary artery nodes, posterior mediastinal nodes, renal artery nodes, or retroperitoneal, NOS.
Regional Lymph Nodes (SS1977) to Distant (SS2000)
3. Involvement in pleura.
Regional (SS1977) to Distant (SS2000)

B. Stage Shift

<u>Stage</u>	<u>SS 1977</u>	<u>SS 2000</u>
Localized	31.8%	31.8%
Regional-Ext	8.7%	24.1%
Regional-Node	0.8%	0.8%
Reg-Ext + Node	0.8%	1.3%
Distant	35.3%	19.4%
Unknown	22.6%	22.6%
Total	100.0%	100.0%

Data Interpretation

Summary Stage 2000 is not compatible with Summary Stage 1977 codes.

Indirect Coding to Summary Stage 1977 and Summary Stage 2000 based on Extent of Disease Codes
SEER Program Data, 1998-2001, Liver and Intrahepatic Bile Duct

ss1977

ss2000

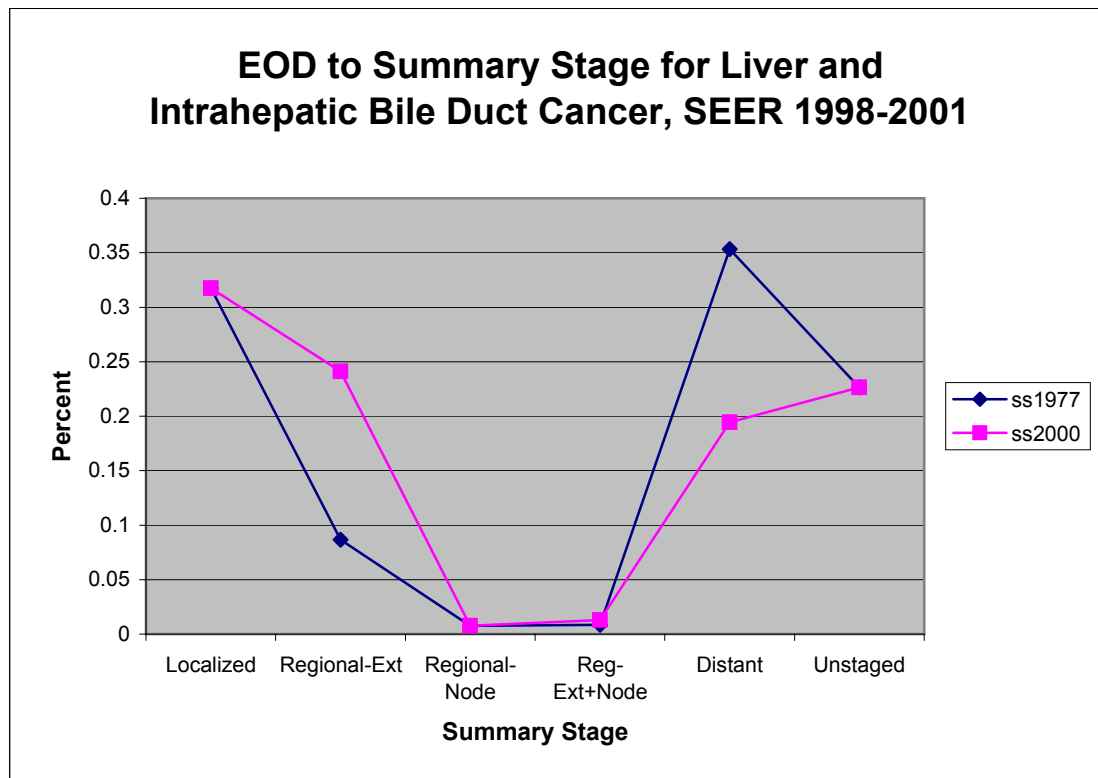
	0: In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	5: Reg, nos	7: Distant	9: Unknown	Total
1: Localized		2707	0	0	0	0	0	0	2707
2: Regional		0	739	0	0	0	0	0	739
3: Reg LN		0	0	65	0	0	0	0	65
4: Reg + LN		0	0	0	72	0	0	0	72
5: Reg, nos		0	0	0	0	0	0	0	0
7: Distant		0	1317	0	38	0	1657	0	3012
9: Unknown		0	0	0	0	0	0	1929	1929
Total		2707	2056	65	110	0	1657	1929	8524

Proportion:	0: In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	5: Reg, nos	7: Distant	9: Unknown	Total
1: Localized		0.317574	0	0	0	0	0	0	0.317574
2: Regional		0	0.086696	0	0	0	0	0	0.086696
3: Reg LN		0	0	0.007626	0	0	0	0	0.007626
4: Reg + LN		0	0	0	0.008447	0	0	0	0.008447
5: Reg, nos		0	0	0	0	0	0	0	0
7: Distant		0	0.154505	0	0.004458	0	0.194392	0	0.353355
9: Unknown		0	0	0	0	0	0	0.226302	0.226302
Total		0.317574	0.241201	0.007626	0.012905	0	0.194392	0.226302	1

p_0 0.841037072

p_e 0.241833848

K 0.790332333



Gallbladder, Other Biliary, and Biliary, NOS (C23.9, C24.8, C24.9)

A. Summary Stage Rule Changes

1. Invasion of/through serosa.
Localized (SS1977) to Regional Extension (SS2000)
2. Involvement in pericholedochal (common bile duct) nodes, periduodenal nodes, peripancreatic (near head of pancreas only) nodes, or porta hepatis (portal) (hilar) [in hilus of liver].
Distant (SS1977) to Regional Lymph Node (SS2000)
3. Involvement in cystic artery/vein, hepatic artery, or portal vein.
Regional (SS1977) to Distant (SS2000)

B. Stage Shift

<u>Stage</u>	<u>SS 1977</u>	<u>SS 2000</u>
Localized	17.8%	12.4%
Regional-Ext	21.9%	27.4%
Regional-Node	2.5%	1.2%
Reg-Ext + Node	5.2%	6.6%
Distant	43.6%	43.6%
Unknown	8.8%	8.8%
Total	100.0%	100.0%

29.6%

35.2%

Data Interpretation

Summary Stage 2000 is not entirely compatible with Summary Stage 1977 codes. The change in rules results in cases shifting from local to some regional subcodes in SS2000.

Indirect Coding to Summary Stage 1977 and Summary Stage 2000 based on Extent of Disease Codes
SEER Program Data, 1998-2001, Gall Bladder, Other Biliary, and Biliary NOS

ss1977

ss2000

	0: In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	5: Reg, nos	7: Distant	9: Unknown	Total
1: Localized		239	106	0	0	0	0	0	345
2: Regional		0	424	0	0	0	0	0	424
3: Reg LN		0	0	23	26	0	0	0	49
4: Reg + LN		0	0	0	101	0	0	0	101
5: Reg, nos		0	0	0	0	0	0	0	0
7: Distant		0	0	0	0	0	843	0	843
9: Unknown		0	0	0	0	0	0	171	171
Total		239	530	23	127	0	843	171	1933

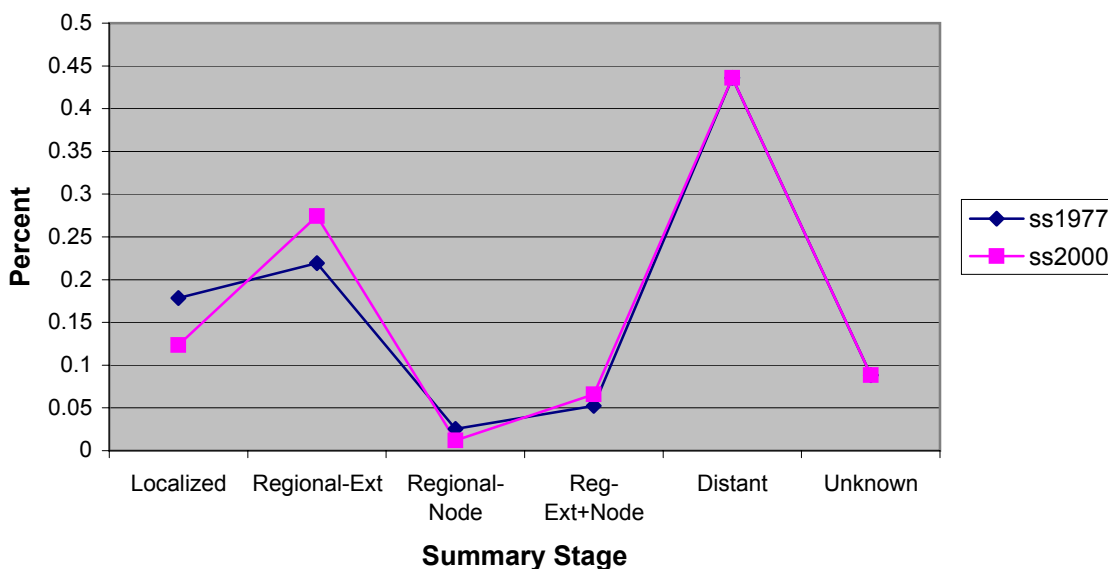
Proportion:	0: In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	5: Reg, nos	7: Distant	9: Unknown	Total
1: Localized		0.123642	0.054837	0	0	0	0	0	0.178479
2: Regional		0	0.219348	0	0	0	0	0	0.219348
3: Reg LN		0	0	0.011899	0.013451	0	0	0	0.025349
4: Reg + LN		0	0	0	0.05225	0	0	0	0.05225
5: Reg, nos		0	0	0	0	0	0	0	0
7: Distant		0	0	0	0	0	0.43611	0	0.43611
9: Unknown		0	0	0	0	0	0	0.088464	0.088464
Total		0.123642	0.274185	0.011899	0.065701	0	0.43611	0.088464	1

p_0 0.931712364

p_e 0.283961494

K 0.904631336

**EOD to Summary Stage for Gallbladder, Other Biliary,
and Biliary NOS Cancers, SEER 1998-2001**



Pancreas (C 25)

A. Summary Stage Rule Changes

1. Head of pancreas (C25.0) involving the body of stomach.
Distant (SS1977) to Regional Extension (SS2000)
2. Body and/or tail of pancreas (C25.1 and C25.2) involving adrenal (suprarenal) gland, ileum or jejunum.
Regional Extension (SS1977) to Distant (SS2000)
3. Any specific parts of pancreas: head, body, tail, pancreatic duct, Islets of Langerhans (C25.0-C25.4) involving gall bladder, kidney, liver including porta hepatis, mesenteric fat, mesentery, mesocolon or peritoneum.
Regional Extension (SS1977) to Distant (SS2000)

B. Stage Shift

There is a moderate up-staging, primarily from regional extension and/or regional extension plus lymph node to distant.

<u>Stage</u>	<u>SS 1977</u>	<u>SS 2000</u>
Localized	8.5%	8.5%
Regional-Ext	22.9%	18.9%
Regional-Node	2.6%	2.6%
Reg-Ext + Node	10.7%	9.8%
Distant	44.4%	49.3%
Unknown	10.9%	10.9%
Total	100.0%	100.0%

36.1%

31.3%

C. Data Interpretation

Summary Stage 2000 is not entirely compatible with Summary Stage 1977 codes. The major shift is cases in regional stage according to SS1977 moving to a distant stage in SS2000. As a more common site, even small differences could have a public health impact.

Indirect Coding to Summary Stage 1977 and Summary Stage 2000 based on Extent of Disease Codes
SEER Program Data, 1998-2001, Pancreas

ss1977

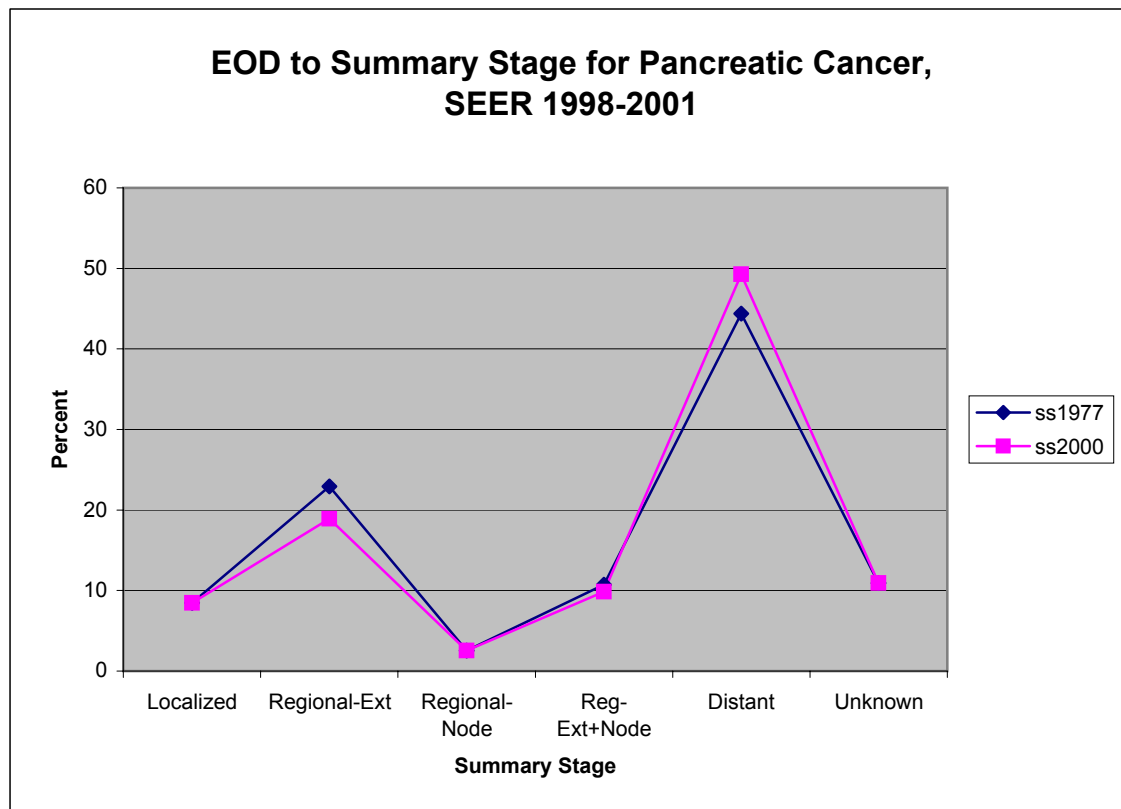
ss2000

	0: In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	7: Distant	9: Unknown	Total
1: Localized		864	0	0	0	0	0	864
2: Regional		0	1919	0	0	419	0	2338
3: Reg LN		0	0	261	0	0	0	261
4: Reg + LN		0	0	0	1001	92	0	1093
7: Distant		0	9	0	4	4511	0	4524
9: Unknown		0	0	0	0	0	1115	1115
Total		864	1928	261	1005	5022	1115	10195

Proportion:	0: In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	7: Distant	9: Unknown	Total
1: Localized		0.084747	0	0	0	0	0	0.084747
2: Regional		0	0.18823	0	0	0.041099	0	0.229328
3: Reg LN		0	0	0.025601	0	0	0	0.025601
4: Reg + LN		0	0	0	0.098185	0.009024	0	0.107209
7: Distant		0	0.000883	0	0.000392	0.442472	0	0.443747
9: Unknown		0	0	0	0	0	0.109367	0.109367
Total		0.084747	0.189112	0.025601	0.098578	0.492594	0.109367	1

0.9278

p0 0.948602
pe 0.292323
K 0.927371



Lung and Bronchus (C 34.0-C34.3, C34.8-C34.9)

A. Summary Stage Rule Changes

1. Extension to:
aorta
brachial plexus from superior sulcus
chest (thoracic) wall
diaphragm
pancoast tumor (superior sulcus syndrome)
parietal (mediastinal) pleura
Distant (SS1977) to Regional by direct extension only (SS2000)
2. Multiple masses/separate tumor nodule(s) in the SAME lobe.
Localized (SS1977) to Regional by direct extension only (SS2000)
3. Tumor of main stem bronchus < 2.0 cm from carina.
Localized (SS1977) to Regional by direct extension only (SS2000)
4. Separate tumor nodule(s) in different lobe.
Localized (SS1977) to Distant (SS2000)

B. Stage Shift

<u>Stage</u>	<u>SS 1977</u>	<u>SS 2000</u>
Localized	17.7%	16.0%
Regional-Ext	5.6%	7.6%
Regional-Node	8.6%	6.9%
Reg-Ext + Node	5.7%	7.4%
Distant	52.2%	51.9%
Unknown	10.2%	10.2%
Total	100.0%	100.0%

19.9%

21.9%

Data Interpretation

Summary Stage 2000 is not entirely compatible with Summary Stage 1977 codes; however, the differences are small except within the regional stage categories.

Lung cancer is a common site, thus even small differences could have a public health impact.

Indirect Coding to Summary Stage 1977 and Summary Stage 2000 based on Extent of Disease Codes
SEER Program Data, 1998-2001, Lung and Bronchus

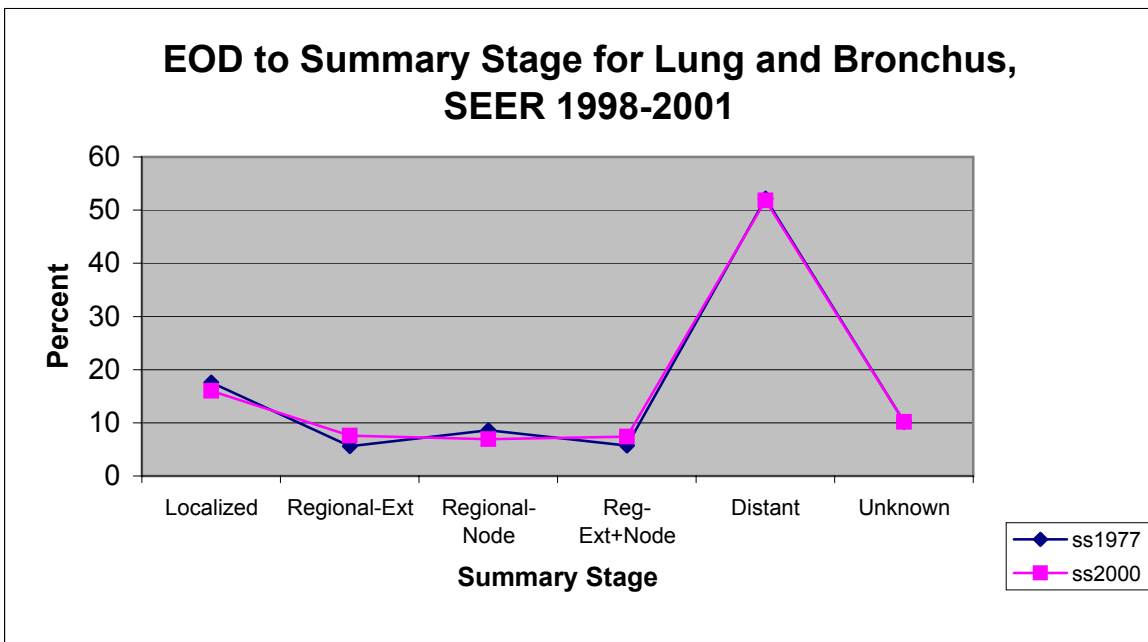
ss1977

ss2000

	0: In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	7: Distant	9: Unknown	Total
1: Localized		13509	739	0	0	672	0	14920
2: Regional		0	4753	0	0	0	0	4753
3: Reg LN		0	0	5857	728	704	0	7289
4: Reg + LN		0	0	0	4795	0	0	4795
7: Distant		0	949	0	706	42465	0	44120
9: Unknown		0	0	0	0	0	8650	8650
Total		13509	6441	5857	6229	43841	8650	84527

Proportion:	0: In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	7: Distant	9: Unknown	Total
1: Localized		0.159819	0.008743	0	0	0.00795	0	0.176512
2: Regional		0	0.056231	0	0	0	0	0.056231
3: Reg LN		0	0	0.069291	0.008613	0.008329	0	0.086233
4: Reg + LN		0	0	0	0.056727	0	0	0.056727
7: Distant		0	0.011227	0	0.008352	0.502384	0	0.521963
9: Unknown		0	0	0	0	0	0.102334	0.102334
Total		0.159819	0.076201	0.069291	0.073692	0.518663	0.102334	1

p0 0.946786
pe 0.323845
K 0.921299



Melanoma of skin, vulva, penis, and scrotum (C44.0-44.9, C51.0-51.2, C51.8-51.9, C60.0-60.1, C60.8-60.9, and C63.2)

A. Summary Stage Rule Changes

1. Involvement in subcutaneous tissue invaded (through entire dermis).
Localized (SS1977) to Regional Extension (SS2000)

B. Stage Shift

<u>Stage</u>	<u>SS 1977</u>	<u>SS 2000</u>
Localized	87.8%	85.6%
Regional-Ext	0.7%	2.9%
Regional-Node	4.3%	3.7%
Reg-Ext + Node	0.3%	0.9%
Distant	3.5%	3.5%
Unknown	3.4%	3.4%
Total	100.0%	100.0%

C. Data Interpretation

Summary Stage 2000 is not entirely compatible with Summary Stage 1977 codes. The major shift is cases in local stage according to SS1977 moving to a regional stage in SS2000.

Indirect Coding to Summary Stage 1977 and Summary Stage 2000 based on Extent of Disease Codes
SEER Program Data, 1998-2001, Melanoma

ss1977

ss2000

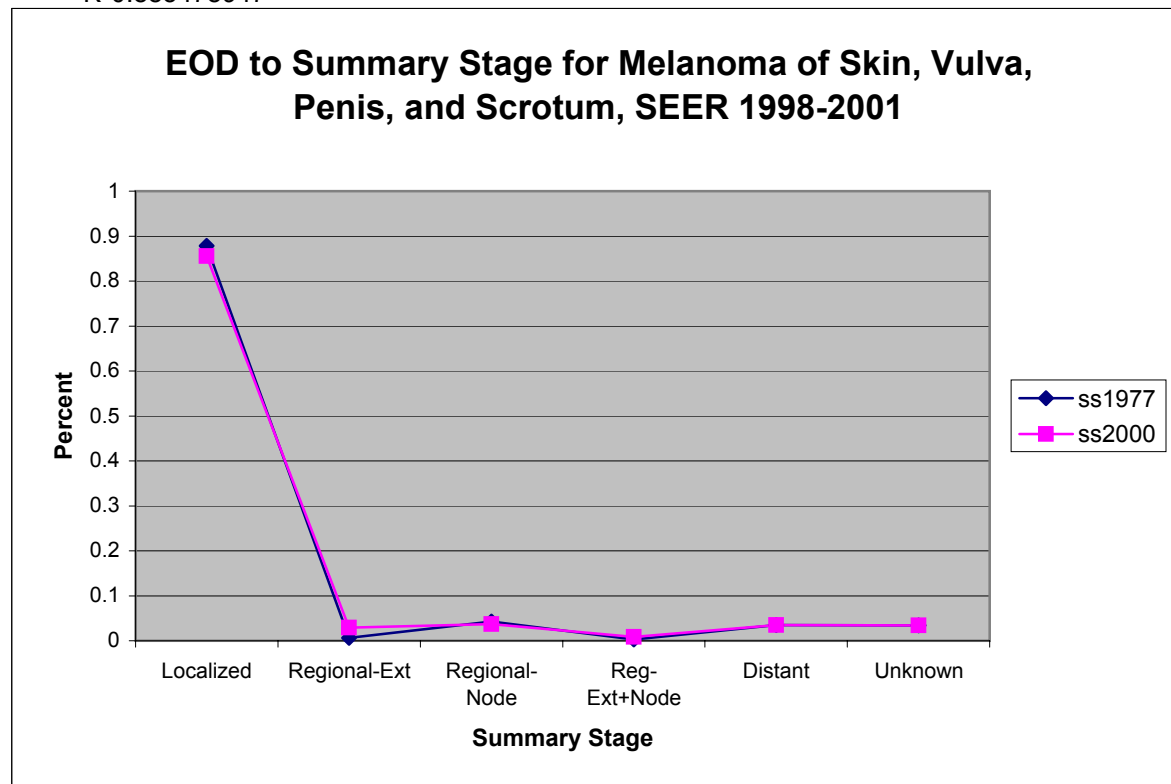
	0: In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	5: Reg, nos	7: Distant	9: Unknown	Total
1: Localized		21262	556	0	0	0	0	0	21818
2: Regional		0	163	0	0	0	0	0	163
3: Reg LN		0	0	927	139	0	0	0	1066
4: Reg + LN		0	0	0	78	0	0	0	78
5: Reg, nos		0	0	0	0	0	0	0	0
7: Distant		0	0	0	0	0	864	0	864
9: Unknown		0	0	0	0	0	0	856	856
Total		21262	719	927	217	0	864	856	24845

Proportion:	0: In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	5: Reg, nos	7: Distant	9: Unknown	Total
1: Localized		0.855786	0.022379	0	0	0	0	0	0.878165
2: Regional		0	0.006561	0	0	0	0	0	0.006561
3: Reg LN		0	0	0.037311	0.005595	0	0	0	0.042906
4: Reg + LN		0	0	0	0.003139	0	0	0	0.003139
5: Reg, nos		0	0	0	0	0	0	0	0
7: Distant		0	0	0	0	0	0.034776	0	0.034776
9: Unknown		0	0	0	0	0	0	0.034454	0.034454
Total		0.855786	0.028939	0.037311	0.008734	0	0.034776	0.034454	1

p_0 0.972026565

p_e 0.755735434

K 0.885478947



Vagina (C 52.9)

A. Summary Stage Rule Changes

1. Extension to:
 bladder, NOS excluding mucosa
 bladder wall
 rectal wall, NOS
 rectum, NOS excluding mucosa
 pelvic wall (frozen pelvis)
Distant (SS1977) to Regional by direct extension only (SS2000)
2. Vagina, lower third (no distinct site code) involving:
 inguinal, NOS lymph nodes
 superficial inguinal (femoral) lymph nodes
Distant (SS1977) to Regional lymph node involvement only (SS2000)
3. Vagina, upper two-thirds (no distinct site code) involving the pelvic, NOS lymph nodes
Distant (SS1977) to Regional lymph node involvement only (SS2000)

B. Stage Shift

<u>Stage</u>	<u>SS 1977</u>	<u>SS 2000</u>
Localized	33.7%	33.7%
Regional-Ext	23.5%	30.6%
Regional-Node	2.0%	2.2%
Reg-Ext + Node	2.4%	4.7%
Distant	23.5%	13.5%
Unknown	14.9%	15.3%
Total	100.0%	100.0%

27.9%

37.5%

C. Data Interpretation

Summary Stage 2000 is not compatible with Summary Stage 1977 codes.

Indirect Coding to Summary Stage 1977 and Summary Stage 2000 based on Extent of Disease Codes
SEER Program Data, 1998-2001, Vagina

ss1977

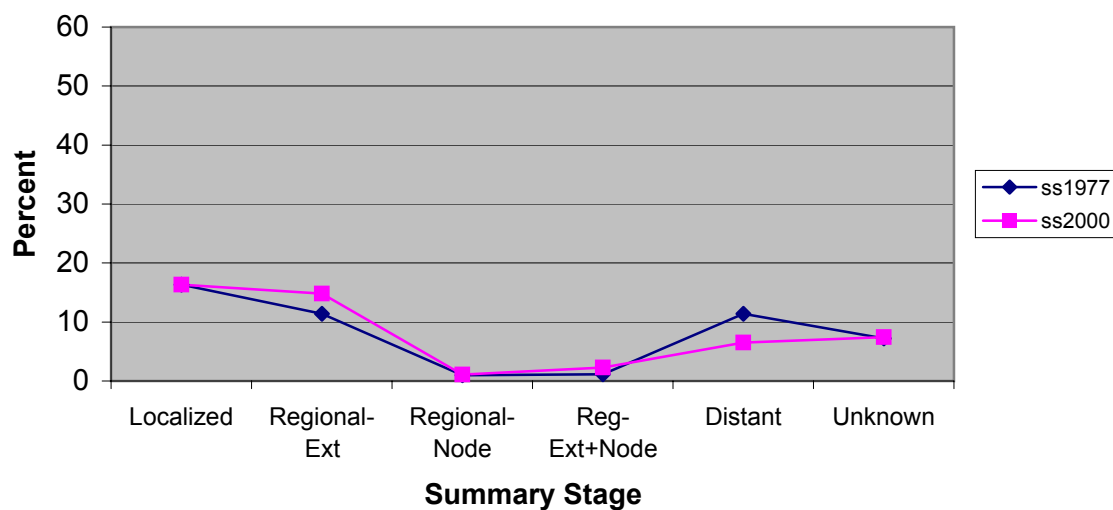
ss2000

	0: In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	7: Distant	9: Unknown	Total
1: Localized		185	0	0	0	0	0	185
2: Regional		0	129	0	0	0	0	129
3: Reg LN		0	0	11	0	0	0	11
4: Reg + LN		0	0	0	13	0	0	13
7: Distant		0	39	1	13	74	2	129
9: Unknown		0	0	0	0	0	82	82
Total		185	168	12	26	74	84	549

Proportion:	0: In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	7: Distant	9: Unknown	Total
1: Localized		0.336976	0	0	0	0	0	0.336976
2: Regional		0	0.234973	0	0	0	0	0.234973
3: Reg LN		0	0	0.020036	0	0	0	0.020036
4: Reg + LN		0	0	0	0.023679	0	0	0.023679
7: Distant		0	0.071038	0.001821	0.023679	0.134791	0.003643	0.234973
9: Unknown		0	0	0	0	0	0.149362	0.149362
Total		0.336976	0.306011	0.021858	0.047359	0.134791	0.153005	1

p0 0.899818
pe 0.241542
K 0.867913

**EOD to Summary Stage for Vagina,
SEER 1998-2001**



Cervix Uteri (C 53.0-C53.1, C53.8-C53.9)

A. Summary Stage Rule Changes

1. Extension to:
 ureter, intra- and extramural
 vulva
 fallopian tubes
 ovary (ies),
 urethra
 frozen pelvis
Distant (SS1977) to Regional by direct extension only (SS2000)

B. Stage Shift

<u>Stage</u>	<u>SS 1977</u>	<u>SS 2000</u>
Localized	52.9%	52.9%
Regional-Ext	23.4%	23.6%
Regional-Node	3.6%	3.6%
Reg-Ext + Node	4.0%	4.1%
Distant	10.5%	10.3%
Unknown	5.6%	5.6%
Total	100.0%	100.0%

31.0%

31.3%

Data Interpretation

The distribution of Summary Stage 1977 and Summary Stage 2000 is very similar. However, individual cases may be classified differently according to the two systems, and thus for some uses, this impact should be reviewed for comparability.

Indirect Coding to Summary Stage 1977 and Summary Stage 2000 based on Extent of Disease Codes
SEER Program Data, 1998-2001, Cervix Uteri

ss1977

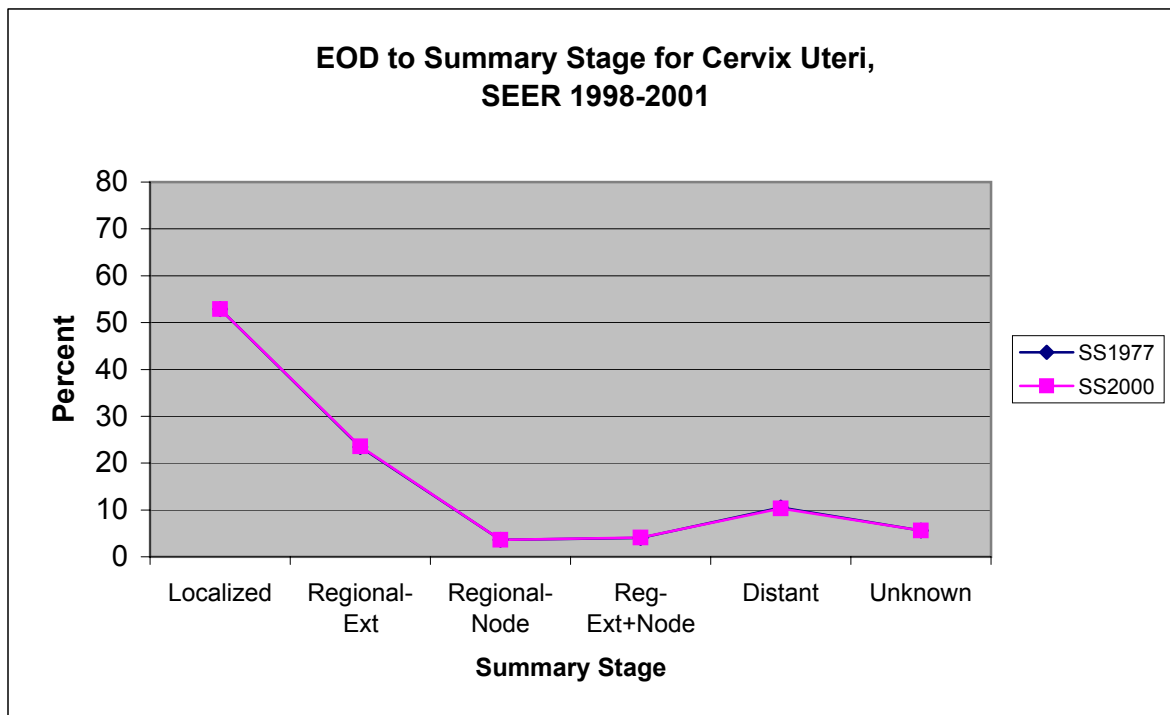
ss2000

	0: In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	7: Distant	9: Unknown	Total
1: Localized		3800	0	0	0	0	0	3800
2: Regional		0	1684	0	0	0	0	1684
3: Reg LN		0	0	255	0	0	0	255
4: Reg + LN		0	0	0	286	0	0	286
7: Distant		0	11	0	4	742	0	757
9: Unknown		0	0	0	0	0	402	402
Total		3800	1695	255	290	742	402	7184

Proportion:	0: In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	7: Distant	9: Unknown	Total
1: Localized		0.528953	0	0	0	0	0	0.528953
2: Regional		0	0.23441	0	0	0	0	0.23441
3: Reg LN		0	0	0.035496	0	0	0	0.035496
4: Reg + LN		0	0	0	0.039811	0	0	0.039811
7: Distant		0	0.001531	0	0.000557	0.103285	0	0.105373
9: Unknown		0	0	0	0	0	0.055958	0.055958
Total		0.528953	0.235941	0.035496	0.040367	0.103285	0.055958	1

Simple Kappa 0.9968

p0 0.997912
pe 0.35198
K 0.996778



Corpus Uteri; Uterus, NOS (C 54.0-C54.3, C54.8-C54.9, C55.9)

A. Summary Stage Rule Changes

1. Extension or metastasis to:
 ureter (extension)
 vulva (extension)
 bladder, NOS excluding mucosa (metastasis)
 bladder wall (metastasis)
 rectal wall, NOS (metastasis)
 rectum, NOS excluding mucosa (metastasis)
 pelvis wall (metastasis)
 frozen pelvis (metastasis)
 vagina (extension or metastasis)
Distant (SS1977) to Regional by direct extension only (SS2000)
2. Involvement of superficial inguinal (femoral) lymph nodes
Regional (SS1977) to Distant (SS2000)

B. Stage Shift

<u>Stage</u>	<u>SS 1977</u>	<u>SS 2000</u>
Localized	69.8%	69.8%
Regional-Ext	12.5%	13.3%
Regional-Node	1.8%	1.8%
Reg-Ext + Node	2.9%	3.2%
Distant	8.6%	7.4%
Unknown	4.4%	4.4%
Total	100.0%	100.0%

17.2%

18.3%

C. Data Interpretation

The distribution of summary stage 1977 and summary stage 2000 codes is very similar. However, individual cases may be classified differently according to the two systems, and thus for some uses, this impact should be reviewed for comparability.

Indirect Coding to Summary Stage 1977 and Summary Stage 2000 based on Extent of Disease Codes
SEER Program Data, 1998-2001, Corpus Uteri and Uterus NOS

ss1977

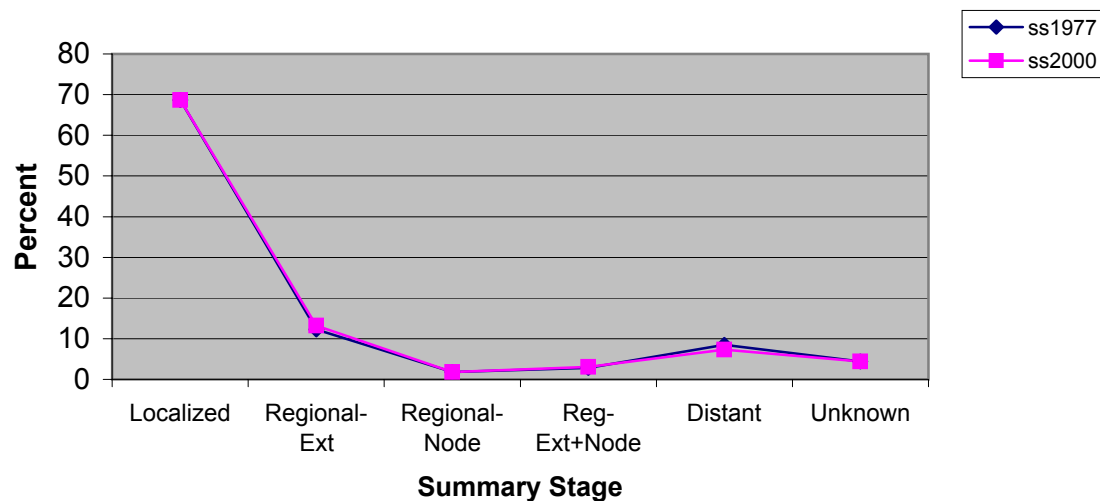
ss2000

	0: In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	7: Distant	9: Unknown	Total
1: Localized		13080	0	0	0	0	0	13080
2: Regional		0	2334	0	0	0	0	2334
3: Reg LN		0	0	337	0	4	0	341
4: Reg + LN		0	0	0	528	7	0	535
7: Distant		0	170	0	65	1374	0	1609
9: Unknown		0	0	0	0	2	828	830
Total		13080	2504	337	593	1387	828	18729

Proportion:	0: In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	7: Distant	9: Unknown	Total
1: Localized		0.698382	0	0	0	0	0	0.698382
2: Regional		0	0.12462	0	0	0	0	0.12462
3: Reg LN		0	0	0.017993	0	0.000214	0	0.018207
4: Reg + LN		0	0	0	0.028192	0.000374	0	0.028565
7: Distant		0	0.009077	0	0.003471	0.073362	0	0.08591
9: Unknown		0	0	0	0	0.000107	0.04421	0.044316
Total		0.698382	0.133696	0.017993	0.031662	0.074056	0.04421	1

p0 0.986759
pe 0.513952
K 0.972757

**EOD to Summary Stage for Corpus Uteri and Uterus NOS,
SEER 1998-2001**



Ovary (C 56.9)

A. Summary Stage Rule Changes

1. Tumor limited to ovary(ies), capsules ruptured.
Localized (SS1977) to Regional Extension (SS2000)
2. Implants on ovary, ovary surface, adnexa, contralateral broad ligament, fallopian tube, mesovarium.
Distant (SS1977) to Regional Extension (SS2000)
3. Extension or implants on uterus, bladder, bladder serosa, cul de sac, parametrium, rectosigmoid, rectum, sigmoid colon, sigmoid mesentery, ureter, uterine serosa.
Distant (SS1977) to Regional Extension (SS2000)
4. Involvement in inguinal and lateral sacral lymph nodes
Distant (SS1977) to Regional Lymph Node (SS2000)

B. Stage Shift

<u>Stage</u>	<u>SS 1977</u>	<u>SS 2000</u>
Localized	23.1%	23.1%
Regional-Ext	9.4%	14.7%
Regional-Node	0.5%	0.5%
Reg-Ext + Node	0.8%	1.3%
Distant	60.4%	54.6%
Unknown	5.8%	5.9%
Total	100.0%	100.0%

10.7%

16.5%

Data Interpretation

Summary Stage 2000 is not compatible with Summary Stage 1977 codes.
 The major shift is cases in distant stage according to SS1977 moving to a regional stage in SS2000.

Indirect Coding to Summary Stage 1977 and Summary Stage 2000 based on Extent of Disease Codes
SEER Program Data, 1998-2001, Ovary

ss1977

ss2000

	0: In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	7: Distant	9: Unknown	Total
1: Localized		2884	0	0	0	0	0	2884
2: Regional		0	1172	0	0	0	0	1172
3: Reg LN		0	0	64	0	0	0	64
4: Reg + LN		0	0	0	98	0	0	98
7: Distant		0	658	3	59	6807	6	7533
9: Unknown		0	0	0	0	0	725	725
Total		2884	1830	67	157	6807	731	12476

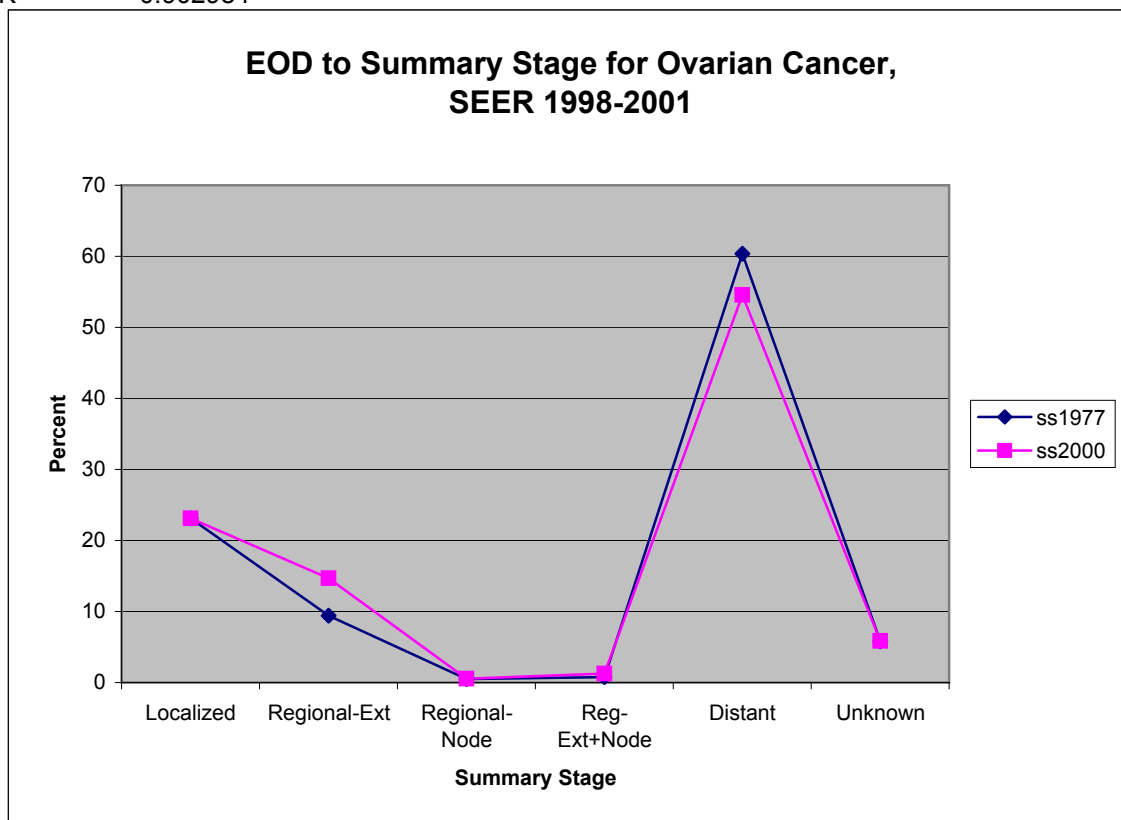
Proportion:	0: In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	7: Distant	9: Unknown	Total
1: Localized		0.231164	0	0	0	0	0	0.231164
2: Regional		0	0.09394	0	0	0	0	0.09394
3: Reg LN		0	0	0.00513	0	0	0	0.00513
4: Reg + LN		0	0	0	0.007855	0	0	0.007855
7: Distant		0	0.052741	0.00024	0.004729	0.545608	0.000481	0.603799
9: Unknown		0	0	0	0	0	0.058112	0.058112
Total		0.231164	0.146682	0.00537	0.012584	0.545608	0.058592	1

Simple Kappa 0.9036

p0 0.941808

pe 0.400185

K 0.902984



Fallopian Tube (C57.0)

A. Summary Stage Rule Changes

1. Involvement of:
 inguinal lymph nodes
 lateral sacral (laterosacral) lymph nodes
 Distant (SS1977) to Regional lymph nodes (SS2000)
2. Extension to:
 cul de sac (rectouterine pouch)
 omentum
 ovary, contralateral
 rectosigmoid
 sigmoid
 small intestine.
 Distant (SS1977) to Regional by direct extension only (SS2000)

B. Stage Shift

<u>Stage</u>	<u>SS 1977</u>	<u>SS 2000</u>
Localized	33.9%	33.9%
Regional-Ext	6.7%	17.7%
Regional-Node	4.3%	4.9%
Reg-Ext + Node	1.5%	3.7%
Distant	51.7%	37.9%
Unknown	1.8%	1.8%
Total	100.0%	100.0%

12.5%

26.3%

C. Data Interpretation

Summary Stage 2000 is not compatible with Summary Stage 1977 codes.
 The major shift is cases in distant stage according to SS1977
 moving to a regional stage in SS2000.

Indirect Coding to Summary Stage 1977 and Summary Stage 2000 based on Extent of Disease Codes
SEER Program Data, 1998-2001, Fallopian Tube

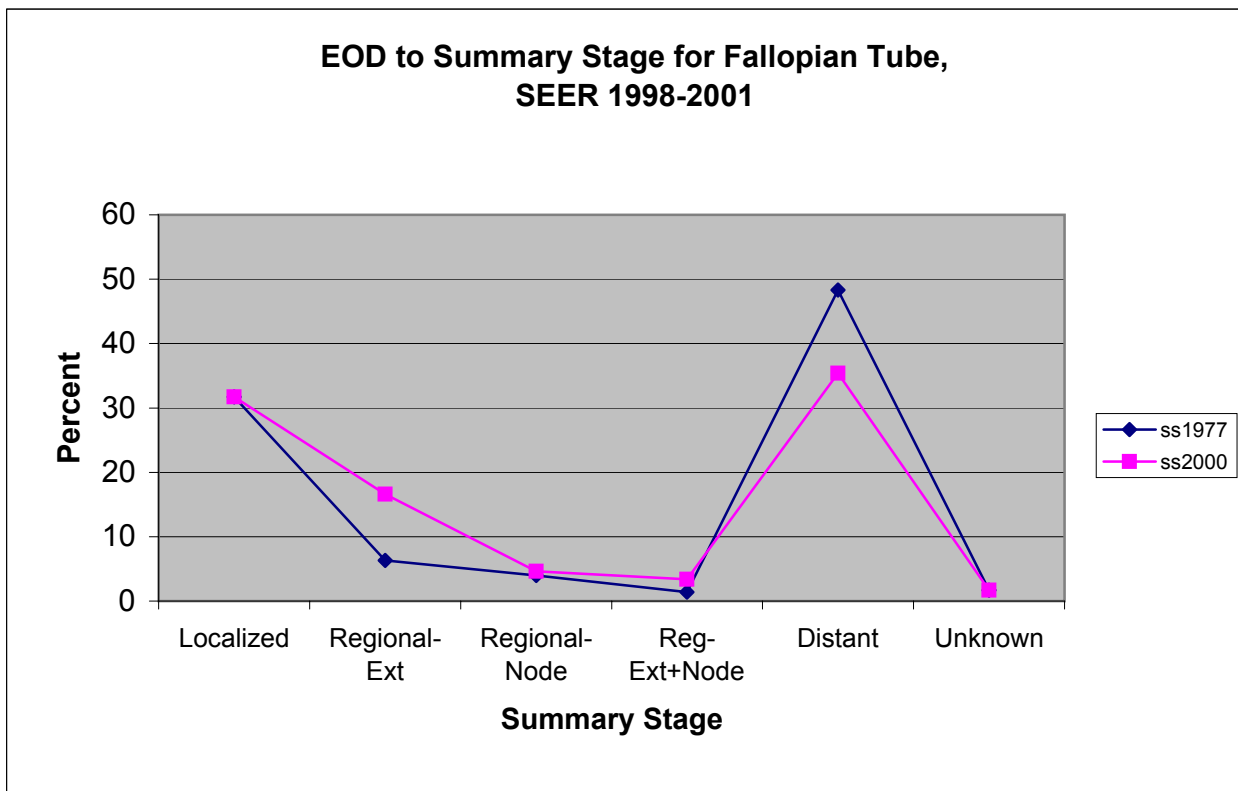
ss1977

ss2000

	0: In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	7: Distant	9: Unknown	Total
1: Localized		111	0	0	0	0	0	111
2: Regional		0	22	0	0	0	0	22
3: Reg LN		0	0	14	0	0	0	14
4: Reg + LN		0	0	0	5	0	0	5
7: Distant		0	36	2	7	124	0	169
9: Unknown		0	0	0	0	0	6	6
Total		111	58	16	12	124	6	327

Proportion:	0: In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	7: Distant	9: Unknown	Total
1: Localized		0.33945	0	0	0	0	0	0.33945
2: Regional		0	0.067278	0	0	0	0	0.067278
3: Reg LN		0	0	0.042813	0	0	0	0.042813
4: Reg + LN		0	0	0	0.015291	0	0	0.015291
7: Distant		0	0.110092	0.006116	0.021407	0.379205	0	0.51682
9: Unknown		0	0	0	0	0	0.018349	0.018349
Total		0.33945	0.17737	0.04893	0.036697	0.379205	0.018349	1

p0 0.862385
pe 0.326132
K 0.795784



Penis (C 60.0-C60.2, C60.8-C60.9)

Excludes Malignant Melanoma, Kaposi Sarcoma and Mycosis Fungoides, Sezary Syndrome, and other Lymphomas

A. Summary Stage Rule Changes

There were no summary stage rule changes for Penis from SS1977 to SS2000. The following reflect the summary stage rule changes from Historic Stage to SS2000.

1. Involvement in prostate.

Distant (Historic stage) to Regional by direct extension (SS2000).

2. Involvement in Iliac, NOS and Pelvic, NOS.

Distant (Historic stage) to Regional lymph nodes (SS2000).

B. Stage Shift

Seven cases shifted from regional and unknown stage to distant for this site.

<u>Stage</u>	<u>SS 1977</u>	<u>SS 2000</u>
In situ	46.6%	46.6%
Localized	30.9%	30.9%
Regional-Ext	12.3%	12.3%
Regional-Node	2.6%	2.3%
Reg-Ext + Node	3.2%	2.8%
Distant	2.1%	2.9%
Unknown	2.5%	2.2%
Total	100.0%	100.0%

Brackets in the original image indicate that for SS 1977, Regional-Ext (12.3%), Regional-Node (2.6%), and Reg-Ext + Node (3.2%) are grouped together to total 18.1%. Similarly, for SS 2000, Regional-Ext (12.3%), Regional-Node (2.3%), and Reg-Ext + Node (2.8%) are grouped together to total 16.4%.

C. Data Interpretation

Because of the extremely small numbers of cases for this site (855 cases over 4 years), caution should be used in examining changes in time trends in stage at diagnosis.

Indirect Coding to Summary Stage 1977 and Summary Stage 2000 based on Extent of Disease Codes
SEER Program Data, 1998-2001, Penis

ss1977

ss2000

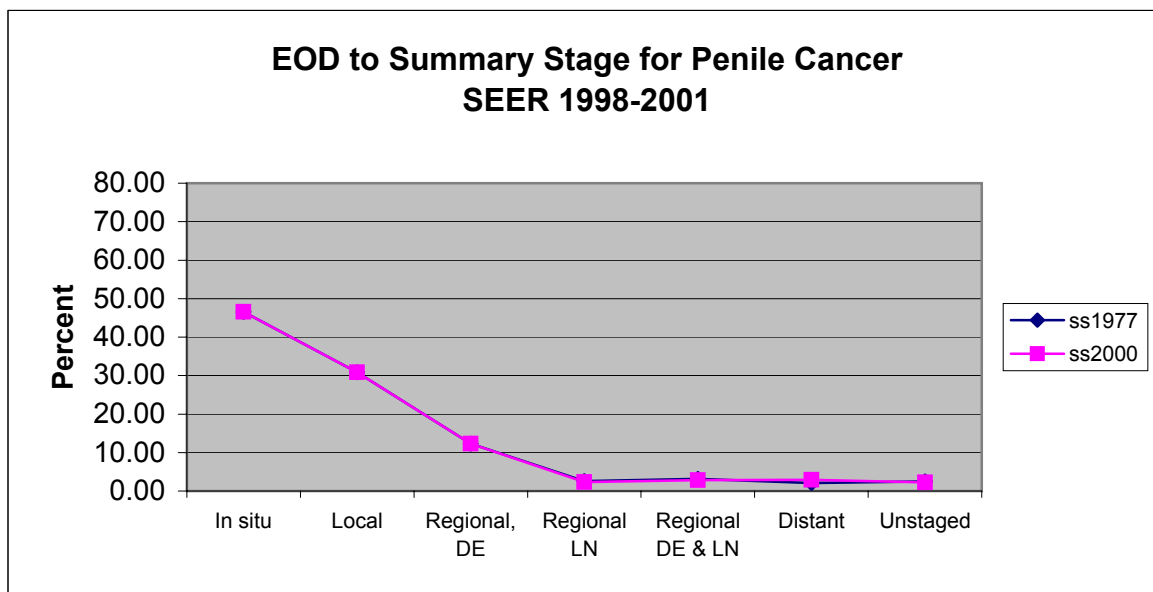
	1: Localized	2: Reg Ext	3: Reg LN	Reg, E + LN	7: Distant	9: Unknown	Total
0: In Situ	0	0	0	0	0	0	0
1: Localized	264	0	0	0	0	0	264
2: Regional	0	105	0	0	0	0	105
3: Reg LN	0	0	20	0	2	0	22
4: Reg + LN	0	0	0	24	3	0	27
7: Distant	0	0	0	0	18	0	18
9: Unknown	0	0	0	0	2	19	21
Total	264	105	20	24	25	19	457

Proportion	0: In Situ	1: Localized	2: Reg Ext	3: Reg LN	Reg, E + LN	7: Distant	9: Unknown	Total
0: In Situ	0	0	0	0	0	0	0	0
1: Localized	0.577681	0	0	0	0	0	0	0.577681
2: Regional	0	0.229759	0	0	0	0	0	0.229759
3: Reg LN	0	0	0.043764	0	0.004376	0	0	0.04814
4: Reg + LN	0	0	0	0.052516	0.006565	0	0	0.059081
7: Distant	0	0	0	0	0.039387	0	0	0.039387
9: Unknown	0	0	0	0	0.004376	0.041575	0.045952	1
Total	0.577681	0.229759	0.043764	0.052516	0.054705	0.041575		

p_0 0.984682713

p_e 0.395778768

K 0.974649539



Prostate (C61.9)

A. Summary Stage Rule Changes

1. Involvement in levator muscles, skeletal muscle, NOS, or ureter(s).
Distant (SS1977) to Regional Extension (SS2000)
2. No extracapsular extension, but margins involved.
Localized (SS1977) to Regional Extension (SS2000)
3. Involvement in common iliac nodes.
Regional Lymph Node (SS1977) to Distant (SS2000)

B. Stage Shift

<u>Stage</u>	<u>SS 1977</u>	<u>SS 2000</u>
Localized	86.3%	77.5%
Regional-Ext	2.7%	12.2%
Regional-Node	1.0%	0.5%
Reg-Ext + Node	0.2%	0.6%
Distant	4.6%	4.6%
Unknown	5.3%	4.6%
Total	100.0%	100.0%

3.9% 13.3%

Data Interpretation

Summary Stage 2000 is not compatible with Summary Stage 1977 codes.

Indirect Coding to Summary Stage 1977 and Summary Stage 2000 based on Extent of Disease Codes
SEER Program Data, 1998-2001, Prostate

ss1977

	0: In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	5: Reg, nos	7: Distant	9: Unknown	Total
1: Localized		79967	9689	0	0	0	15	0	89671
2: Regional			2823	0	0	0	0	0	2823
3: Reg LN		0	0	534	495	0	3	0	1032
4: Reg + LN		0	0	0	165	0	0	0	165
5: Reg, nos		0	0	0	0	0	0	0	0
7: Distant			0	0	0	0	4774	0	4774
9: Unknow	1	558	122	6	6	0	2	4774	5469
Total	1	80525	12634	540	666	0	4794	4774	103934

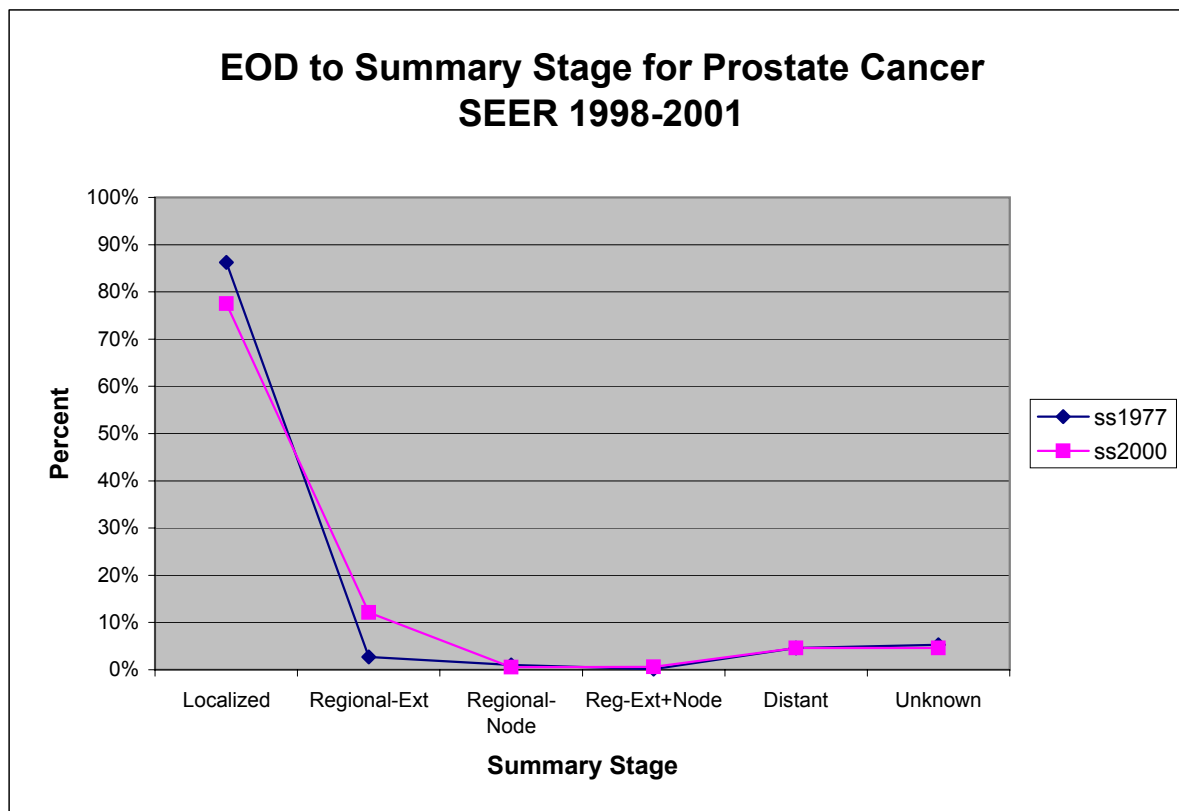
ss2000

Proportion:	In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	5: Reg, nos	7: Distant	9: Unknown	Total
1: Localized		0.769402	0.093223	0	0	0	0.00014432	0	0.862769
2: Regional		0	0.027161	0	0	0	0	0	0.027161
3: Reg LN		0	0	0.00513788	0.004762638	0	2.8864E-05	0	0.009929
4: Reg + LN		0	0	0	0.001587546	0	0	0	0.001588
5: Reg, nos		0	0	0	0	0	0	0	0
7: Distant		0	0	0	0	0	0.045933	0	0.045933
9: Unknown		0.005369	0.001174	5.7729E-05	5.77289E-05	0	1.9243E-05	0.045933	0.05262
Total		0.774771	0.121558	0.0051956	0.006407913	0	0.04612543	0.045933	1

p_0 0.895154617

p_e 0.676346869

K 0.676056332



Bladder (C67.0-C67.9)

A. Summary Stage Rule Changes

1. Involvement of the common iliac lymph nodes
Regional (SS1977) to Distant (SS2000)
2. Extension in males only to:
pubic bone
rectum
Regional (SS1977) to Distant (SS2000)

B. Stage Shift

<u>Stage</u>	<u>SS 1977</u>	<u>SS 2000</u>
Localized	84.8%	84.8%
Regional-Ext	5.7%	5.7%
Regional-Node	0.8%	0.8%
Reg-Ext + Node	1.7%	1.6%
Distant	3.7%	3.7%
Unknown	3.4%	3.4%
Total	100.0%	100.0%

8.2 %

8.1%

C. Data Interpretation

The distribution of summary stage 1977 and summary stage 2000 codes is very similar. However, individual cases may be classified differently according to the two systems, and thus for some uses, this impact should be reviewed for comparability.

Indirect Coding to Summary Stage 1977 and Summary Stage 2000 based on Extent of Disease Codes
SEER Program Data, 1998-2001, Bladder

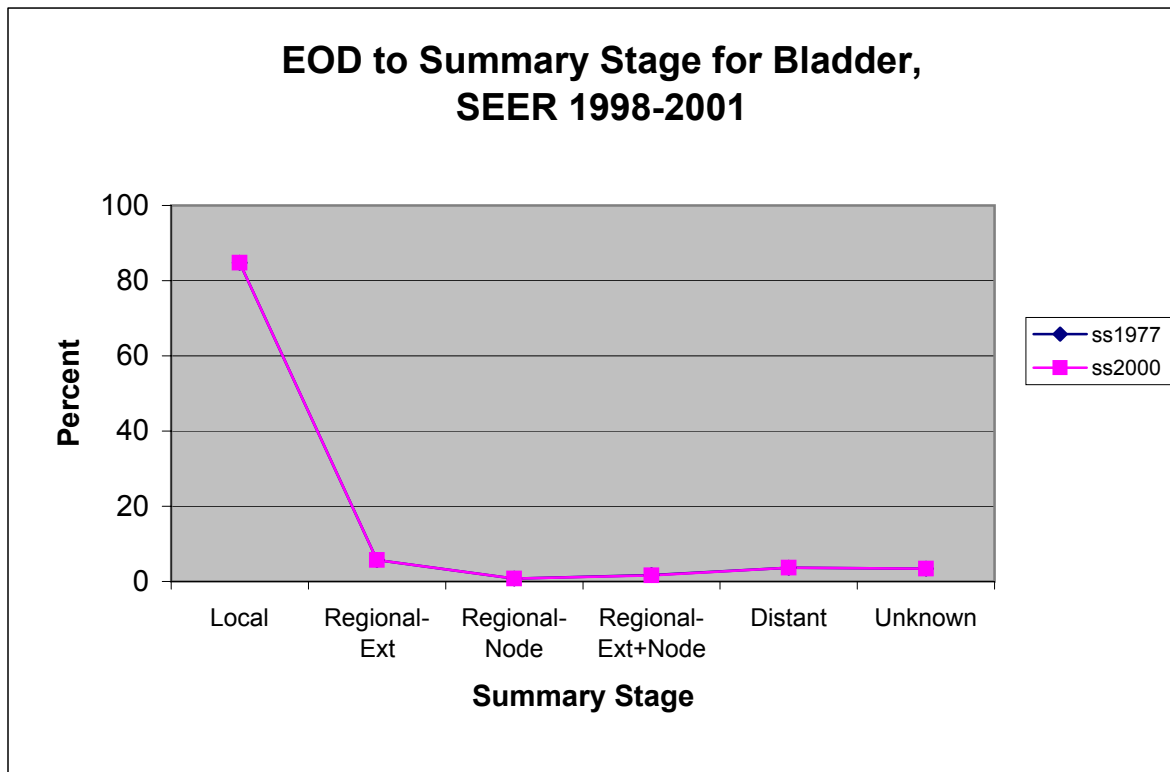
ss1977

ss2000

	0: In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	7: Distant	9: Unknown	Total
1: Localized		23831	0	0	0	0	0	23831
2: Regional		0	1589	0	0	0	0	1589
3: Reg LN		0	0	225	0	3	0	228
4: Reg + LN		0	0	0	461	11	0	472
7: Distant		0	0	0	0	1032	0	1032
9: Unknown		0	0	0	0	0	957	957
Total		23831	1589	225	461	1046	957	28109

Proportion:	0: In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	7: Distant	9: Unknown	Total
1: Localized		0.847807	0	0	0	0	0	0.847807
2: Regional		0	0.05653	0	0	0	0	0.05653
3: Reg LN		0	0	0.008005	0	0.000107	0	0.008111
4: Reg + LN		0	0	0	0.0164	0.000391	0	0.016792
7: Distant		0	0	0	0	0.036714	0	0.036714
9: Unknown		0	0	0	0	0	0.034046	0.034046
Total		0.847807	0.05653	0.008005	0.0164	0.037212	0.034046	1

p0 0.999502
pe 0.724838
K 0.99819



Thyroid (C73.9)

A. Summary Stage Rule Changes

1. Involvement of:
Delphian lymph nodes
mediastinal, NOS lymph nodes
supraclavicular (transverse cervical) lymph nodes
Distant (SS1977) to Regional lymph node (SS2000)

B. Stage Shift

There is a minor shift from distant to regional stage.

<u>Stage</u>	<u>SS 1977</u>	<u>SS 2000</u>
Localized	65.2%	65.2%
Regional-Ext	6.7%	6.7%
Regional-Node	12.1%	12.7%
Reg-Ext + Node	5.5%	6.0%
Distant	7.7%	6.5%
Unknown	2.9%	2.9%
Total	100.0%	100.0%

24.3 %

25.4%

C. Data Interpretation

The distribution of summary stage 1977 and summary stage 2000 codes is very similar. However, individual cases may be classified differently according to the two systems, and thus for some uses, this impact should be reviewed for comparability.

Indirect Coding to Summary Stage 1977 and Summary Stage 2000 based on Extent of Disease Codes
SEER Program Data, 1998-2001, Thyroid

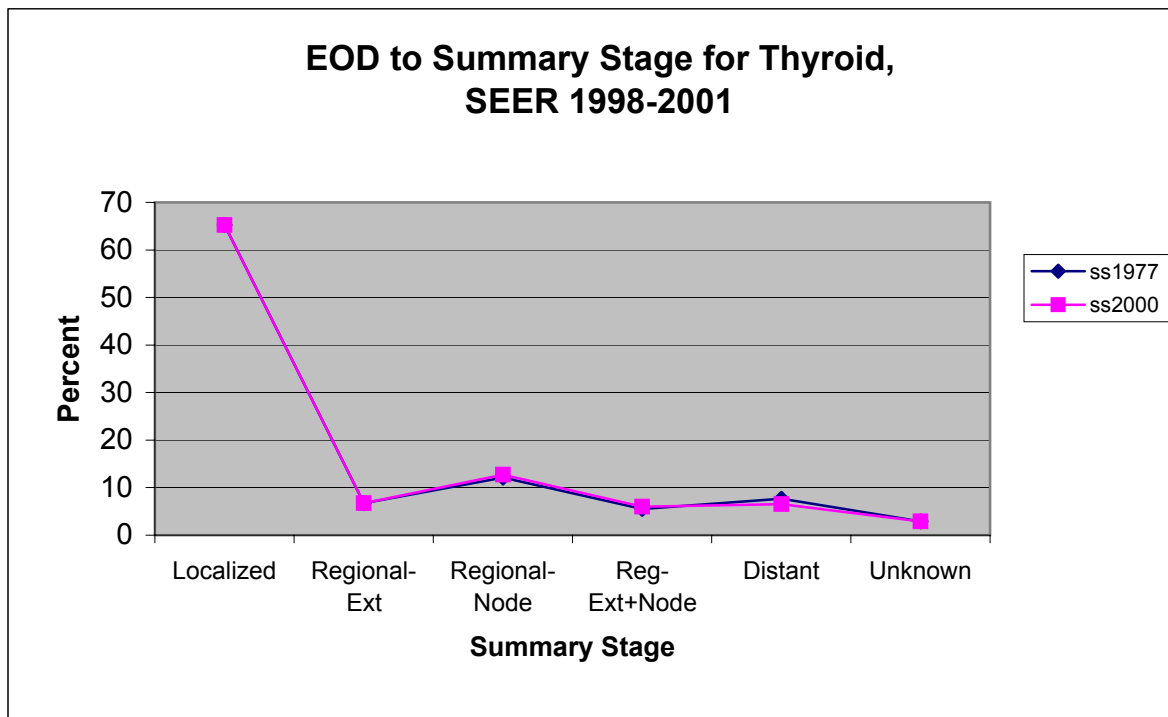
ss1977

ss2000

	0: In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	7: Distant	9: Unknown	Total
1: Localized		7261	0	0	0	0	0	7261
2: Regional		0	744	0	0	0	0	744
3: Reg LN		0	0	1344	0	0	0	1344
4: Reg + LN		0	0	0	609	0	0	609
7: Distant		0	0	75	59	722	6	862
9: Unknown		0	0	0	0	0	319	319
Total		7261	744	1419	668	722	325	11139

Proportion:	0: In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	7: Distant	9: Unknown	Total
1: Localized		0.651854	0	0	0	0	0	0.651854
2: Regional		0	0.066792	0	0	0	0	0.066792
3: Reg LN		0	0	0.120657	0	0	0	0.120657
4: Reg + LN		0	0	0	0.054673	0	0	0.054673
7: Distant		0	0	0.006733	0.005297	0.064817	0.000539	0.077386
9: Unknown		0	0	0	0	0	0.028638	0.028638
Total		0.651854	0.066792	0.12739	0.059969	0.064817	0.029177	1

p0 0.987432
pe 0.453875
K 0.976986



Kaposi Sarcoma of all Sites (M-9140)

A. Summary Stage Rule Changes

1. There was no separate staging scheme in the 1977 Summary Stage Guide for Kaposi sarcoma. These cases would have been staged previously using the scheme for “skin other than melanoma” for cases which arose in a skin site; and, for cases which arose in mucosal or visceral sites the scheme for that site would have been used to assign stage.

B. Stage Shift

<u>Stage</u>	<u>SS 1977</u>	<u>SS 2000</u>
Localized	0.0%	59.0%
Regional-Ext	0.0%	8.0%
Regional-Node	0.0%	8.3%
Reg-Ext + Node	0.0%	3.9%
Distant	0.0%	2.0%
Unknown	0.0%	18.8%
Total	0.0%	100.0%

20.2%

C. Data Interpretation

Summary Stage 2000 is not compatible with Summary Stage 1977 codes.
No stages were defined for Kaposi Sarcoma in the 1977 staging system.

Indirect Coding to Summary Stage 1977 and Summary Stage 2000 based on Extent of Disease Codes
Kaposi Sarcoma

ss1977

ss2000

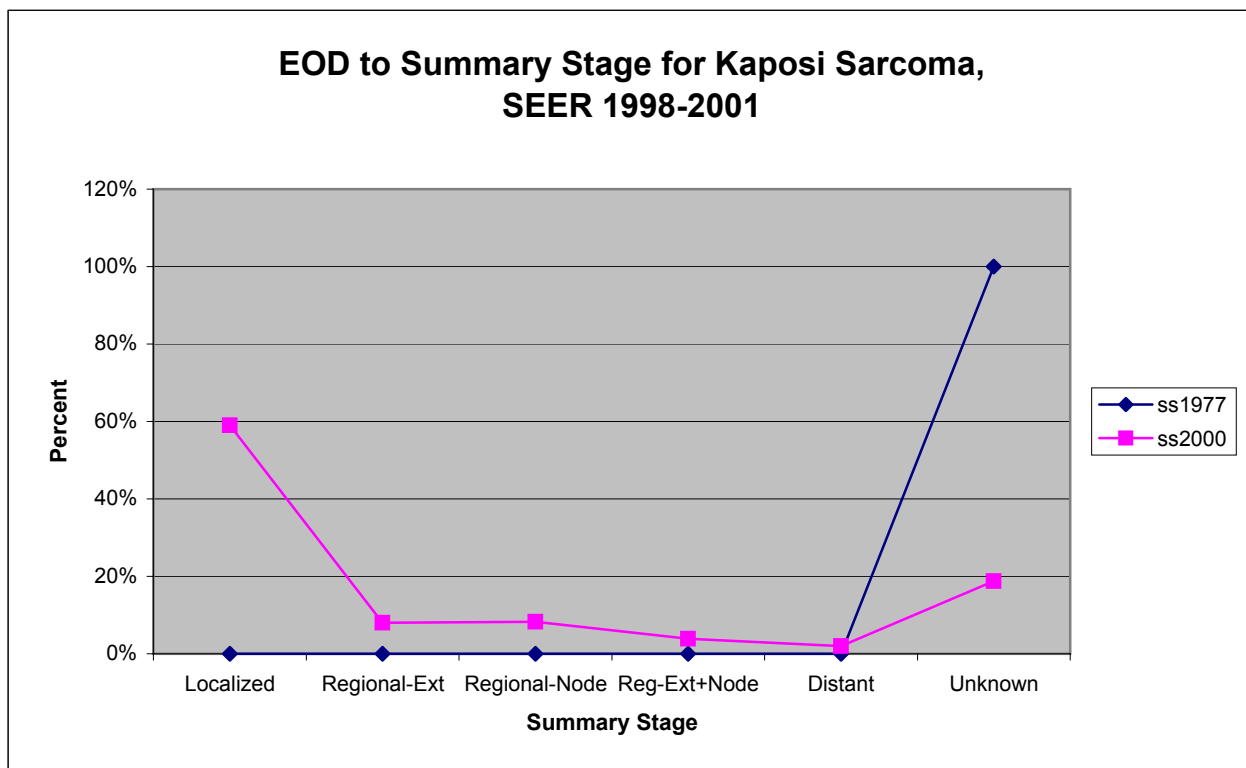
	0: In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	5: Reg, nos	7: Distant	9: Unknown	Total
1: Localized		0	0	0	0	0	0	0	0
2: Regional		0	0	0	0	0	0	0	0
3: Reg LN		0	0	0	0	0	0	0	0
4: Reg + LN		0	0	0	0	0	0	0	0
5: Reg, nos		0	0	0	0	0	0	0	0
7: Distant		0	0	0	0	0	0	0	0
9: Unknown		829	113	116	55	0	28	264	1405
Total		829	113	116	55	0	28	264	1405

Proportion:	0: In Situ	1: Localized	2: Regional	3: Reg LN	4: Reg + LN	5: Reg, nos	7: Distant	9: Unknown	Total
1: Localized		0	0	0	0	0	0	0	0
2: Regional		0	0	0	0	0	0	0	0
3: Reg LN		0	0	0	0	0	0	0	0
4: Reg + LN		0	0	0	0	0	0	0	0
5: Reg, nos		0	0	0	0	0	0	0	0
7: Distant		0	0	0	0	0	0	0	0
9: Unknown		0.590036	0.080427	0.082562	0.039146	0	0.019929	0.1879	1
Total		0.590036	0.080427	0.082562	0.039146	0	0.019929	0.1879	1

p_0 0.187900356

p_e 0.187900356

K 0



Hodgkin Disease and Non-Hodgkin Lymphoma of All Sites

A. Summary Stage Rule Changes

No rule changes.

B. Stage Shift

<u>Stage</u>	<u>SS 1977</u>	<u>SS 2000</u>
Localized	30.2%	30.2%
Regional, NOS	17.8%	17 .8%
Distant	44.8%	44 .8%
Unknown	7.2%	7.2%
Total	100.0%	100.0%

Data Interpretation

The Summary Stage rule changes in 2000 did not involve lymphomas.