Collaboration in California: The Prostate Experience

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Background:

In the spring of 2012, the California Cancer Registry (CCR) initiated what would become, a three part analysis to determine the reliability of prostate cases on the CCR database. The CCR began this process by performing a recoding audit of prostate cancer cases diagnosed in 2011. The results of the audit were used to conduct a mini reliability study with the assistance of the California Cancer Registrars Association (CCRA). Those results were then presented at an educational event and training was provided focusing on the coding weaknesses among prostate cancer cases. In the spring of 2013 a target based audit of prostate cases was performed to measure the success and effectiveness of the training effort.

Objective

The initial audit purpose was to determine the confidence level of the quality of prostate data in the CCR data base and to determine the educational need. Then, perform a qualitative analysis to determine the resulting impact of training efforts.

Methodology:

Part I: In April 2012 a recoding audit was conducted focusing on prostate cases diagnosed in 2011. There were 180 cases audited with 29 data variables audited per case, which resulted in a total of 5220 data variables audited. The sampling method used was a simple random sample of all prostate cases diagnosed in 2011 in the California data base at the time. The 180 cases were audited using a peer review methodology where each case was audited by two auditors, independently of each other. Upon completion of the audit the two auditors compared their codes and any differences were reconciled. The remaining differences became discrepancies.

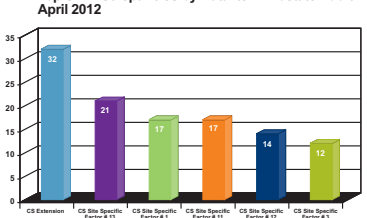
Part I: Results:

There were a total of 186 discrepancies noted on the audit. The results of the audit revealed ineffective coding of:

- CS Extension 32 (17.2%)
- CS Site Specific Factor 13 (Number of Cores Examined 21 (11.2%)
- CS Site Specific Factor #1 (PSA Lab Value) 17 (9.1%)
- CS Site Specific Factor #11 (Gleason's Tertiary Pattern Value on Prostatectomy/Autopsy) 17 (9.1%)
- CS Site Specific Factor #12 (Number of Cores Positive) 14 (7.5%)
- CS Site Specific Factor #3 (CS Extension Pathologic) 12 (6.5%)

The data variable that had the most discrepancies was CS Extension. CS Extension had 32 discrepancies which accounted for 17.2% of the discrepancies. An important element in coding CS Extension in prostate cases is whether or not the tumor was clinically apparent or inapparent prior to the initial biopsy. There are extensive notes in the Prostate Schema in the CS Staging Manual regarding how to distinguish between these types of tumors. During this audit, the primary issue noted in the coding of CS Extension was the interpretation of apparent or inapparent tumors. This issue accounted for 68.8% of the discrepancies in this data item. This problem has been identified in varying degrees, on all audits conducted on the primary site prostate since the distinction has been made between apparent and inapparent tumors.

Top Six Discrepancies by Data Item Prostate Audit - April 2012



Source: California Cancer Registry, California Department of Public Health.
Prepared by the California Department of Public Health, Cancer Surveillance Section.

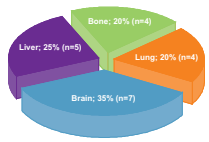
There were problems identified in the data variables CS Mets at Diagnosis Metastatic Sites (Bone, Brain, Liver, and Lung). These were new data variables in 2011 and therefore, had never been audited. The audit result demonstrated a lack of understanding of coding this data item. There were a total of 20 discrepancies, 10.8% of all discrepancies on the audit, in these fields. Through the course of the audit, it was determined that abstractors were coding this field logically rather than following the instruction in the Collaborative Staging Manual. If Mets at Diagnosis is coded to 00 (No Distant Metastasis), these four fields are to be coded to 0 (no metastasis). What was occurring was these four fields were being coded depending on if there was scan performed of the region.

Example: If a patient only had a CT of the Abdomen and a bone scan performed during work up, the abstractor would code as follows:

- CS Mets at Diagnosis Bone: 0 (None)
- CS Mets at Diagnosis Brain: 9 (Unknown)
- CS Mets at Diagnosis Liver: 0 (None)
- CS Mets at Diagnosis Lung: 9 (Unknown)

As a result of these findings, the CCR proposed an edit to the appropriate national edits workgroups that would not allow these fields to be coded to anything other than 0 (No Metastasis) if the CS Mets at Diagnosis field was coded to 00 (No Distant Metastasis) per the coding instruction outlined in the CS Staging Manual.

Distribution of Discrepancies in CS Mets at Dx - Metastatic Sites n=20



Source: California Cancer Registry, California Department of Public Health.
Prepared by the California Department of Public Health, Cancer Surveillance Section.

It was also noted that there was the continued issue of abstractors coding acinar adenocarcinoma to the morphology code 8550 (acinar adenocarcinoma) rather than to 8140 (adenocarcinoma) as instructed by rule H10 in the Multiple Primaries and Histology rules.

Methodology:

Part II: During the fall of 2012, a mini reliability study was performed. The study was designed to test the coding of specific data variables that had the highest number of discrepancies identified in the prior audit. The study consisted of 10 cases and a total of 36 questions. The 10 cases were actual cases from the audit where discrepancies were identified. The questions involved the top six discrepancies identified on the Prostate Audit in April 2012 as well as a few other data variables.

The study was conducted in partnership with the California Cancer Registrars Association (CCRA) which oversaw the development and performance of the study. As a result, participants were able to receive 1 hour of continuing education (CE) for participating. All questions and preferred answers were reviewed and approved by central registry and regional registry QC personnel. The study was open to all CCRA membership for a period of three weeks in September and October 2012. The results were analyzed by CCR staff and regional registry QC reviewers.

There were 36 questions asked between 10 cases. The breakdown of questions asked per case is as follows:

	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9	Case 10
CS Extension (Clinical)	X	X	X		X	X			X	X
CS Tumor Size/Ext Eval	X	X	X		X	X				X
CS Site Specific Factor #3	X	X	X			X			X	
CS Mets at Diagnosis			X			X	X		X	
CS Mets at Diagnosis Bone			X			X	X		X	
CS Mets at Diagnosis Brain			X			X	X		X	
CS Mets at Diagnosis Liver			X			X	X		X	
CS Mets at Diagnosis Lung			X			X	X		X	
CS Site Specific Factor #1	X			X				X		X
CS Site Specific Factor #12					X		X			
CS Site Specific Factor #13					X		X			
Histology									X	X

Results:

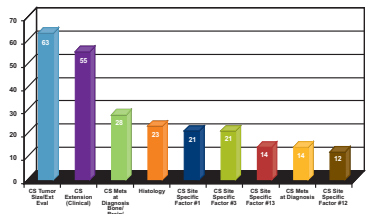
The demographic of the participants were:

- 97% were CTR's
- 54% have been in the field for more than 10 years
- 37% were in American College of Surgeons (ACoS) approved hospitals
- 32% were Central and Regional Registry personnel

These results are compatible to the results identified on the Prostate audit performed by the CCR in April 2012. The results of the prostate audit and reliability study presented the CCR with an opportunity for the CCR to perform training on the identified weaknesses in coding specific data variables among prostate cancer cases.

A presentation was created and presented to registrars in attendance at the Annual CCRA Educational meeting in November 2012. There were a total of 120 registrars in attendance. The results of the audit and reliability study were reviewed in detail with a special focus on the data variables described above. The coding disparities were highlighted and coding instruction reviewed for each of the data variables.

Mini Reliability Study Discrepancy by Variable



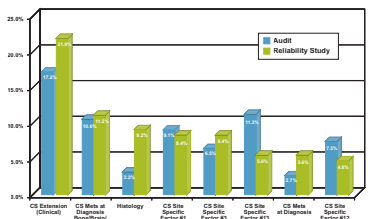
Source: California Cancer Registry, California Department of Public Health.
Prepared by the California Department of Public Health, Cancer Surveillance Section.

Methodology:

Part III: A qualitative analysis was performed to determine the success of the training efforts. The methodology used was in the form of a limited simple random sampling of prostate cases that were abstracted and uploaded to the CCR data base after the training event in November 2012.

The audit focused on the data variables that were identified as the most problematic in the original audit in April 2012 and the reliability study in September 2012.

Discrepancy Compaison Audit vs Reliability Study



Source: California Cancer Registry, California Department of Public Health.
Prepared by the California Department of Public Health, Cancer Surveillance Section.

Results:

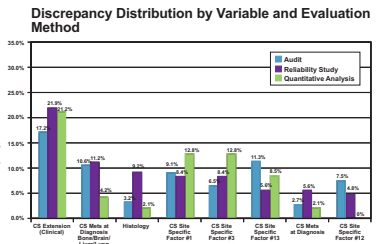
The results revealed continuing coding issues with certain problematic data variables. The results were:

- CS Extension..... 10 (21.2%)
- CS Site Specific Factor #1 (Prostatic Specific Antigen (PSA) Lab Value).. 6 (12.8%)
- CS Site Specific Factor #3 (CS Extension-Pathologic Extension)..... 6 (12.8%)
- CS Site Specific Factor #12 (Number of Cores Positive)..... 0 (0)
- CS Site Specific Factor #13 (Number of Cores Examined)..... 4 (8.5%)
- CS Mets at Diagnosis (Bone, Brain, Liver, Lung)..... 2 (4.2%)
- CS Mets at Diagnosis..... 1 (2.1%)
- Histology..... 1 (2.1%)

When compared to the prior studies, the results demonstrate marked improvement in the coding of the variables CS Mets at Diagnosis-Metastatic Sites (Bone, Brain, Liver, and Lung) fields, and histology.

There are continued disparities in the remaining data variables. The variables CS Extension and CS Site Specific Factor #3 (Pathologic Extension) are related fields and have similar coding problems.

Discrepancy Distribution by Variable and Evaluation Method



Source: California Cancer Registry, California Department of Public Health.
Prepared by the California Department of Public Health, Cancer Surveillance Section.

Conclusion:

Continued training efforts are needed for the coding of prostate cancer. There was improvement in the coding of the data variable CS Mets at Diagnosis – Metastatic Sites (Bone, Brain, Liver, and Lung). This may be due to the implementation of edits IF850, IF852, IF875, and IF885 that restricts registrars from coding these fields logically as described above, and requires the registrar to code the field according to the instruction in the CS Staging Manual.

One of the perpetual issues seems to be continued confusion regarding apparent versus inapparent tumors when coding CS Extension. This problem may exist as long as the industry and standard setting agencies require the distinction between these types of tumors.

An E-Learning module, complete with a presentation, review topics, quizzes and exercises is currently in development and will be posted to the CCR website for further education and training of prostate cancer cases.

A re-evaluation of prostate cancer cases is needed to re-asses the success of training efforts and to mark improvements in coding habits, and will be performed after a reasonable amount of time for the education to begin to take effect.

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