A Review of 2012 Diagnosis Year Cases Submitted from Seven Pathology Laboratories

Illinois State Cancer Registry
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The Illinois State Cancer Registry (ISCR) electronically receives cases from seven pathology laboratories. Workload constraints have prevented ISCR from processing these cases on a regular basis. Concerned that incident cases are being missed and that they may provide additional case information.
Purpose

- Conduct a review to assess the following:
  - Amount of staff resources and time needed
  - Number of cases and primary sites of cancer not reported from other sources
  - Type and quantity of additional information provided
- Chose to examine 2012 diagnosis year cases
- Project carried out in January & February 2014
Methods

- HL7 files were pulled from the PHINMS queue
  - 2,768 cases for 2012 diagnosis year
- Cases were loaded into eMaRC Plus and reviewed for reportability
  - Note that eMaRC isn’t always correct
    - BCC vs. Melanoma
    - Wrong histology or primary site
    - Wrong behavior
    - May not identify the case
- Determined 1,580 cases were reportable
eMaRC Plus

Pathology Findings:

*Prostate Histology: A1 Right Lobe Base: Benign BPH prostatic tissue (40% of the specimen is normal BPH tissue, 60% of the specimen contains cancer). Cancer length is 0.11 cm. Left Lobe apex: MALIGNANT ADENOCARCINOMA, GLEASON SCORE 3 + 4 = 7 INVOLVING 5% of the specimen (1 of 4 cores contain cancer). The pattern is 4. The cancer length is 0.07 cm.

Pathology Clinical History:

Provided ICD-9 code: 739.33, PSA 7.46 ng/ml, Date 2/1/13. Previous biopsy: HGPIN abnormal DRE, nodule on left side.
Cases were partially abstracted while still in eMaRC
Loaded file into Abstract Plus for abstract completion and clearing edits
Loaded file into Link Plus to conduct a linkage between the pathology case file and the cancer registry database (Rocky Mountain Cancer Data System)
Methods

- Review criteria for determining a match
  - Diagnosis date
  - Primary Site
  - Histology
  - Laterality
  - Social Security Number
  - Sex
  - Date of Birth
  - First and Last Names
Results

1,580 Reportable Pathology Lab Cases

- **Match**: 1,129 cases
- **No Match**: 451 cases

- Prostate – 55%
- H&L – 16%
- Melanoma – 8%
- All Other – 23%
Results

Match
1,129 cases

Different Primary
48 cases (4%)

Same Primary
Different Info
677 cases (60%)

No Change
367 cases

Change
310 cases

Same Primary
No Different Info
404 cases (36%)
Results

- Change cases (n=310)
  - Date of diagnosis – 150 differences
    - 43 differences (29%) had a difference over 30 days
    - 19 of those occurred in prostate cases
  - SSN – 97 differences
    - Only 14 instances where central registry database had an unknown SSN and the path lab provided a known SSN
  - Histology – 67 differences
    - 52% resulted in a more specific histology from the path lab
Results

- Change cases (cont.)
  - Primary Site – 50 differences
    - 46% resulted in a more specific primary site from path labs
  - Laterality – 8 differences
  - Various demographic variables – 32 differences
    - Majority were due to spelling differences in first name or last name

- Total of 404 differences
- Note that there could be more than one difference per case
Results

- No Change cases (n=367)
  - 252 cases (69%) had an unknown SSN from the pathology lab
  - Remaining differences occurred between diagnosis date, primary site, or histology
  - In all instances, the central registry data were more complete and precise
## Results

### Top Five Cancer Sites for Cases Reported Solely from a Path Laboratory 2012 Diagnosis Year

<table>
<thead>
<tr>
<th>Primary Site</th>
<th>Number of cases</th>
<th>Percentage of Stand-Alone Path Lab Cases (n=541)</th>
<th>Percentage of Potentially Reportable Path Lab Cases (n=2768)</th>
<th>Percentage of All Cases by Primary Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>C619</td>
<td>285</td>
<td>53%</td>
<td>10%</td>
<td>0.04%</td>
</tr>
<tr>
<td>C421</td>
<td>84</td>
<td>16%</td>
<td>0.03%</td>
<td>0.04%</td>
</tr>
<tr>
<td>C440-449</td>
<td>36</td>
<td>7%</td>
<td>0.01%</td>
<td>0.01%</td>
</tr>
<tr>
<td>C679</td>
<td>26</td>
<td>5%</td>
<td>0.009%</td>
<td>0.009%</td>
</tr>
<tr>
<td>C541</td>
<td>21</td>
<td>4%</td>
<td>0.007%</td>
<td>0.01%</td>
</tr>
</tbody>
</table>
Conclusions

- A total of 251 staff hours were used (0.2 FTE)
- Quantity and type of data improved were minimal
- Cases received solely from path labs may be diagnosed and treated in physician offices that are not currently reporting cases
Future Process

- ISCR will review all cases for reportability within eMaRC
- Operations staff will only abstract and load cases that don’t match cases already received
- This process will allow ISCR to capture all incident cases provided solely by pathology labs while limiting staff workload
Contributors

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Thank You!

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