NCI SEER Transition Tools – Moving to More Modern Technologies

Jean Cyr – Information Management Services
Transition from Collaborative Stage to TNM – how can an API help us?
Polling question, please...
Staging and Prognostic and Predictive Factors

REST API (S&PP API)

- “Get” – both TNM and CS
- “Put” – TNM and CS (editable versions)
- Calculate TNM Stage, Summary Stage 2000
- Calculate Combined Stage
- Calculate CS 02.05.50 stage

S&PP Database

Dev version
(Not yet public)

TNM Data (v1.0)
- Clinical and Path T, N M with coding instructions for cancer coders
- Data items required for staging
- P&P data item definition and which are required by agency
- Staging algorithms

CS Data version 02.05.50 – static
CS Data version 02.05.90 – new histologies and removal of obsolete converted codes

Talks to

Subject Matter Expert Data Entry Tool
(Helios – released April 1, 2015)

Adds, modifies, deletes data via the S&PP API

get requires internet access

put

Public facing S&PP website

Vendors directly using the S&PP API for TNM/CS data collection

get requires internet access

get
No Internet Connection or do not wish to use the S&PP API directly

- Mapping tables (json)
  - V 1.0
  - V 1.1
  - V 1.2
  - Used by anyone
    - who can use json but does NOT have an internet connection
    - Used by anyone whose programs are already written in some other language
    - Java Library
      - V 1.0
      - V 1.1
      - V 1.2
      - SEER DMS or others who can use a Java library
<table>
<thead>
<tr>
<th>Code</th>
<th>Summary Stage Manual</th>
<th>Registrar Notes</th>
<th>Summary Stage 2000 T</th>
</tr>
</thead>
</table>
| 000  | *In situ*  

*Noninvasive; intraepithelial* |  

| 100  | *Localized only*  

*Invasive carcinoma confined to gland of origin*  

*Localized, NOS* |  

| 200  | *Regional by direct extension only*  

*Extension to: Adjacent tissue(s), NOS*  

*Connective tissue*  

*See definition of connective tissue on page 14. Adjacent organs/structures*  

*Thymus and aortic body*  

*Organs/structures in mediastinum*  

*Adrenal (suprarenal)*  

*Kidney*  

*Retroperitoneal structures*  

*Parathyroid*  

*Thymus* |  

|  | *Regional - Direct Extension*  

*Adjacent connective tissue*  

*See definition in General Rules, Part I:*  

*Gerota’s fascia*  

|  |  

*Stated as T3 with no other information on extension*  

*Adjacent organs/structures:*  

*Kidney, ipsilateral or NOS*  

*Retroperitoneal structures including:*  

*Great vessels:*  

*Arteries:* |  

|  |  

|  | *VALUE IS*  

|  | *VALUE L*  

|  | *VALUE RE*
Build intelligent data entry screens (Example 1)

- Registrar enters 2016, 8010, C749
- Vendor asks API – which schema is this?
- API answers “Adrenal Gland”
- Vendor asks API – for Adrenal Gland, what staging data items should I display to the registrar?
- API answers “Clinical T, N and M, Path T, N and M, RX Summ Surgery/Radiation Sequence, RX Summ Systemic/Surgery Sequence”
- Vendor displays those data items with their pick lists
Build intelligent data entry screens (Example 2)

- Registrar enters 2016, 9136, C749
- Vendor asks API – which schema is this?
- API answers “Adrenal Gland”
- Vendor asks API – for Adrenal Gland, what staging data items should I display to the registrar?
- API answers “SEER Primary Tumor, SEER Regional Nodes, SEER Mets” (this histology does not TNM 7 stage)
- Vendor displays those data items with their pick lists
Build intelligent data entry screens (Example 3)

• Registrar enters 2015, 9136, C749
• Vendor asks API – which schema is this?
• API answers “Adrenal Gland”
• Vendor asks API – for Adrenal Gland, what staging data items should I display to the registrar?
• API answers “CS Extension, CS Lymph Nodes, CS Mets at DX, CS Lymph Nodes Eval, CS Mets Eval, CS Tumor Size, CS Tumor Size/Ext Eval”
• Vendor displays those data items with their pick lists
Benefits of using this infrastructure with an API

For registrars:
- They can be presented with intelligent data entry screens for the transition and beyond

For vendors:
- One mechanism for “getting” data about TNM and CS – with various versions of each

For the NCI SEER program
- High quality surveillance data from the registries
Other projects that use the SEER API

- Hematopoietic and Lymphoid Neoplasm data
- SEER Rx data
- Solid Tumor data
- Glossary for Registrars
Polling question, please...