

E-Path Suite

Cancer Registry Automation for Laboratories



The responsibility for ensuring a hospital meets its obligations to the local or state cancer registry all too often falls on the under-resourced laboratory. Furthermore, successfully surfacing all instances of reportable cancer to arrive at accurate, complete and timely datasets is compounded by questions of subjectivity around what constitutes a reportable case, a lack of consistency in how a case is recorded and the sometimes antiquated laboratory information management systems from which the data needs to be extracted.

CLINICAL HISTORY/MICROSCOPY

This right mastectomy specimen demonstrates an invasive ductal carcinoma with the following pathological features:

TUMOUR HISTOLOGY & GRADE

The tumour is of an infiltrating poorly differentiated of non-obscure specified type. The tumour is poorly defined and extremely infiltrative, comprising poorly-formed tubules, nests or strands of cuboidal tumour cells displaying high grade nuclei. The tumour cells are set within fibrotic desmoplastic stroma. Many lactiferous ducts are entrapped within the tumour. Frequent tumour mitoses are seen. Dysplastic hyperplasia is seen in some neoplastic tubules.

Tumour grade (Modified Bloom-Richardson Grading System):
Tubular formation: 1
Nuclear atypia: 3
Tumour mitoses: 2

Synoptic Element	Data Value
Specimen Type	Mastectomy
Laterality	Right
Lymph Node Sampling	Yes
Axillary dissection	Yes
Lymph Nodes Examined	13
Lymph Nodes Positive	3
Lymph Nodes Negative	10
Estrogen Receptor	200455 nm
Specimen Size	Right
Laterality	Lower inner quadrant
Tumour Site	35x36x20 mm
Size of Invasive Component	Invasive Component Greatest dimension
Histologic Type	Invasive ductal carcinoma
Page1 disease without invasive carcinoma	Ductal carcinoma in situ
Classification	Tubular
Bloom-Richardson	Grade II
Grade III	3
Grade I	2
Mitotic Count	10
Receptor	Pathologic Staging (TNM)
HER2 Status	Negative

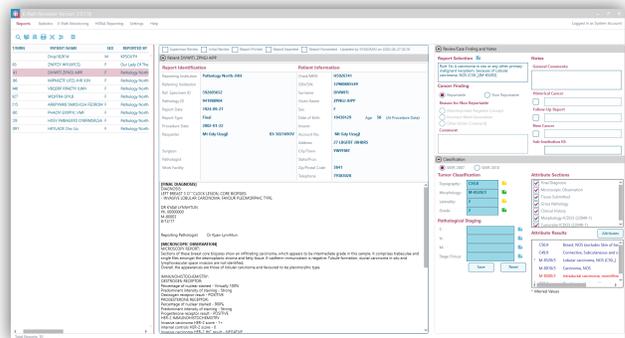
Powered by
Inspirata's
AI and NLP

E-Path Reporter

E-Path Reporter optimizes the cancer registry workflow by deploying fine-tuned artificial intelligence to interpret the text of diagnostic reports instantly on production, and then using local or jurisdiction-specific rules to identify reportable cancer cases. On identification, the reportable case is sent directly to the state cancer registry or cancer registry system resulting in an end-to-end workflow of mere seconds, and with a greater accuracy and efficiency than what might otherwise be achieved through existing manual efforts.

E-Path Reviewer

E-Path Reviewer builds on the foundation afforded by E-Path Reporter by providing the laboratory with the additional flexibility to review cases prior to syndication. Surfacing coding data elements related to morphology, topography, laterality and grade, and pathologic (TNM) staging information, E-Path Reviewer offers scope to quality assure and/or triage cases before they are sent to the registry or relevant internal stakeholders within the hospital for further data abstraction.



Interested in Learning More?

Schedule a Demonstration of our E-Path Suite Today:
<http://inspirata.link/E-Path-Demo-NA>
 Contact Us: +1 (813) 570-8900

Benefits of the E-Path Suite

- Ensures compliance with statutory reporting requirements.
- Accelerates case throughput by removing the need for pathologist to identify all reportable cases.
- Reduces laboratory, IT and administrative staff resources typically spent generating extracts for electronic submission, or in preparing reports for submission by post or fax.
- Eliminates laboratory staff time responding to cancer registry requests for missing pathology reports.
- Requires negligible ongoing input or support from laboratory staff or from IT.
- Compatible with any LIMS via HL7.

E-Path	E-Path Reporter	E-Path Reviewer
Automated review of pathology reports from the LIMS	●	●
Auto-identification of reportable cancers and tumor classification	●	●
Seamless transfer of reportable cancer cases to local registry	●	●
Review Portal for manual tumor coding		●
Automated coding and TNM extraction		●
Augmentation of patient view via auto-collation of parallel reports		●

E-Path In Action

Inspirata's cancer registry automation solutions utilize Natural Language Processing (NLP) based artificial intelligence fine-tuned for cancer and disease reporting requirements. Removing any operator variability and far exceeding human performance, Inspirata's NLP engine is predicated on algorithms which have been proven to achieve sensitivity and specificity scores of 99% and 98% for accuracy and completeness in independent validation by the National Cancer Institute.

Registry	Hospital/Lab	Sensitivity	Specificity
Louisiana Tumor Registry	Our Lady of the Lake	0.989	0.991
Louisiana Tumor Registry	The Pathology Lab (TPL)	1.000	0.982
Louisiana Tumor Registry	Thibodaux	0.993	0.919
Louisiana Tumor Registry	HCSO	0.986	0.995
Louisiana Tumor Registry	Delta Pathology	0.993	0.989
Detroit	Oakwood Hospital	0.992	0.991
Iowa	UnityPoint Des Moines	1.000	0.993
Iowa	Mercy Iowa City	1.000	0.984
Iowa	United Clinical Lab	0.991	0.992
Iowa	Iowa Pathology Associates IPA Des Moines	0.988	0.994
Utah	Intermountain Medical Center	0.986	0.978
Utah	Huntsman Cancer Hospital/U of Utah	0.992	0.966
Utah	St. Mark's Hospital	1.000	0.974
Kentucky Tumor Registry	Norton	0.977	0.987
Kentucky Tumor Registry	Baptist	1.000	0.989
Kentucky Tumor Registry	University of Louisville	0.993	0.987
Hawaii Registry	Kuanani	1.000	1.000
Hawaii Registry	Clinical Labs of Hawaii	1.000	0.985
Hawaii Registry	Queens Medical Labs	1.000	0.992
Hawaii Registry	Kaiser Moanalua	1.000	0.929
New Mexico Cancer Registry	Presbyterian Healthcare System	1.000	0.986
New Mexico Cancer Registry	UNM Cancer Center	0.996	0.984
New Jersey State Cancer Registry	Virtua	1.000	0.991
New Jersey State Cancer Registry	RWJ - Hamilton	1.000	0.992
New Jersey State Cancer Registry	St Peter's	1.000	0.971
Average		0.995	0.982

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Why Inspirata?

- Over 100 institutions in the United States, Canada and Australia use our automated cancer identification and reporting.
- Established cancer reporting network and workflow within which we process >20M clinical reports/year to identify all reportable cancer cases.
- 99% accuracy in cancer case-finding as documented in NCI and other third party validation studies.
- Knowledge-driven capturing institutional and expert knowledge to enable continuous improvement.
- Designed for cancer – Our NLP and AI tools are developed and continuously updated by clinical cancer experts and validated by state and federal cancer registries worldwide.
- Algorithms developed by oncology experts.

“E-Path Reporter has had a significant impact on my department’s manpower, my ability to plan and balance resources, do more studies and move the case-finding abstracting date backward. Now that we are spending less time looking for patient data, we are able to focus on how to make registry data more sophisticated.”

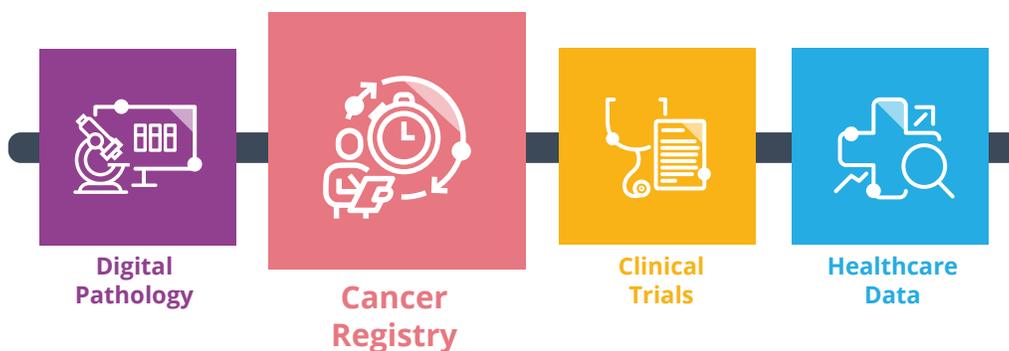
Dr. Juanita Pratt
Manager, Cancer Registry Operations and
Clinical Documentation and Treatment Records
UC Davis Comprehensive Cancer Center, California



How Can NLP Solve Data Challenges in Healthcare?

<http://inspirata.link/NLP-Webinar-US>

Explore how NLP can be applied for cancer registry reporting purposes by watching Inspirata’s recent webinar on NLP Applications in Healthcare.



Make Every Moment Matter

Inspirata helps patients—and the clinicians they trust—make every moment matter in their fight against cancer. Our comprehensive cancer informatics solutions bring disparate data together from across the entire cancer care journey. We combine leading digital pathology solutions with automated cancer registry solutions, comprehensive cancer informatics, and advanced patient engagement tools to afford healthcare providers the broadest oncology informatics platform available.

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