

E-Path Suite

Cancer Registry Automation for NHS Laboratories



The responsibility for ensuring a hospital meets its obligations to the cancer registry all too often falls on the under-resourced NHS 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, the sometimes antiquated laboratory information management systems from which the data needs to be extracted and the potential levying of fines for failure to meet standards.

CLINICAL HISTORY/MACROSCOPY
 Right mastectomy and axillary tissue. A right mastectomy specimen with overlying skin measuring 22cm x 10cm x 7cm. The axillary tail measures 125 x 7cm. The nipple is slightly retracted and located centrally. The superior margin is painted red, the inferior margin painted green and the deep cut margin is painted blue. Cut sections of the underlying breast tissue shows an ill-defined grey white yellow lesion with patchy areas of haemorrhage measuring 35 x 35 x 35mm located immediately below the nipple, 20mm from the inferior margin, 45mm from the deep cut margin, 50mm from the superior margin, 55mm from the medial margin and 100mm from the lateral cut margin. BI - nipple, BI - upper outer quadrant, CI - upper inner quadrant, DI - lower outer quadrant, EI - lower inner quadrant, FI - 9mm tumour composite blocks, H1 - 1 - tumour composite blocks, J1 - deep cut margin, K1 - superior margin, CI - inferior margin, M1 - lymph nodes, N1 - lymph nodes, O - 3 serial slices, lymph node, P - 3 lymph nodes.

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-obvious 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. Microcalcification is seen in some neoplastic tubules.

Tumour grade (Modified Bloom-Richardson (Scoring System):
 Tubular formation:
 Nuclear atypia:
 Tumour mitoses:

Synoptic Element	Data Value
Specimen Type	Mastectomy
Lymph Node Sampling	Axillary dissection
Lymph Nodes Examined	13
Lymph Nodes Positive	3
Lymph Nodes Negative	10
Lymph Node Extension	20x45x55 mm
Specimen Size	22x10x7 mm
Laterality	Right
Location	Lower inner quadrant
Size of Invasive Component	35x35x35 mm
Invasive Component Extension	Invasive ductal carcinoma
Pathologic Type	Ductal carcinoma in situ
Pathologic Component Extension	Paget disease without invasive carcinoma
Cellular	Tubular
Grading System	Bloom-Richardson
Histological Grade	Grade III
Tubular Formation	3
Nuclear Atypia	3
Mitotic Count	10
Mitoses	10
Pathologic Staging (pTNM)	Negative
HER2 Status	Negative

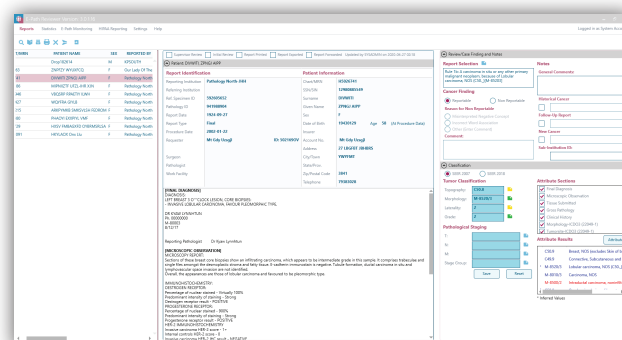
Powered by
Inspirata's
AI and NLP

E-Path Reporter

E-Path Reporter optimises 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 cancer registry 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 trust for further data abstraction.

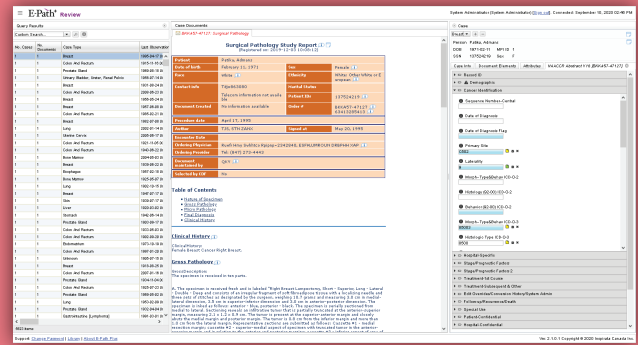


Interested in Learning More?

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<http://inspirata.link/E-Path-Demo-UK>
 Contact Us: +44 (0)1628 599304

E-Path Plus

The formal separation of pathology data away from the patient pathway elements of Cancer Outcomes Services Dataset (COSD) v9.0 means individual NHS laboratories are now wholly responsible for executing the abstraction requirements associated with the new Pathology v4.0. With the spectre of financial penalties for those sites falling short of conformance, E-Path Plus provides laboratory management with a means of effecting tremendous time-savings and improvements in the overall accuracy and consistency in performing this critical abstraction exercise.



Benefits of the E-Path Suite

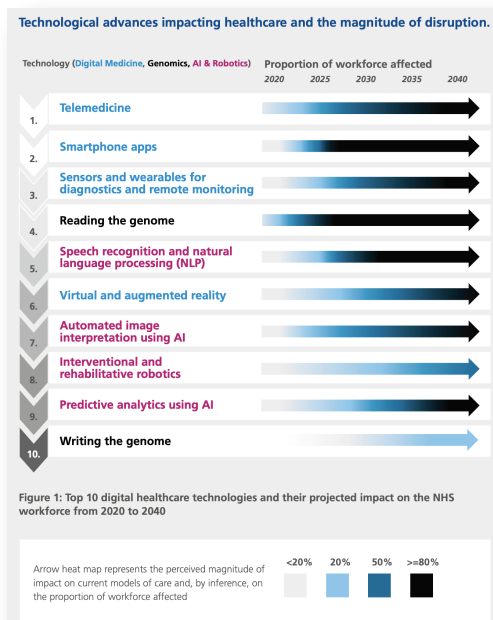
- Ensures compliance with statutory reporting requirements.
- Accelerates case throughput by removing the need for pathologist to identify all reportable cases.
- Reduces laboratory, IT and administrative staff resources typically spent generating extracts for electronic submission, or in preparing reports 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.

NLP for Cancer Reporting

Inspirata's cancer registry automation solutions utilise Natural Language Processing (NLP) based artificial intelligence fine-tuned for cancer and disease reporting requirements. Inspirata's NLP engine is predicated on algorithms proven to achieve sensitivity and specificity scores of 99% and 98% respectively, removing operator variability and far exceeding human performance.

The Topol Review, an independent report commissioned by The Secretary of State for Health and Social Care, cited NLP as one of the top five technological advances set to impact the provision of services delivered by the NHS.

Illustration sourced from The Topol Review, 2019, pg. 27 www.topol.hee.nhs.uk



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Why Inspirata?

- Over 100 global institutions use our automated cancer identification and reporting solutions.
- 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 National Cancer Institute 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 national, state and federal 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."

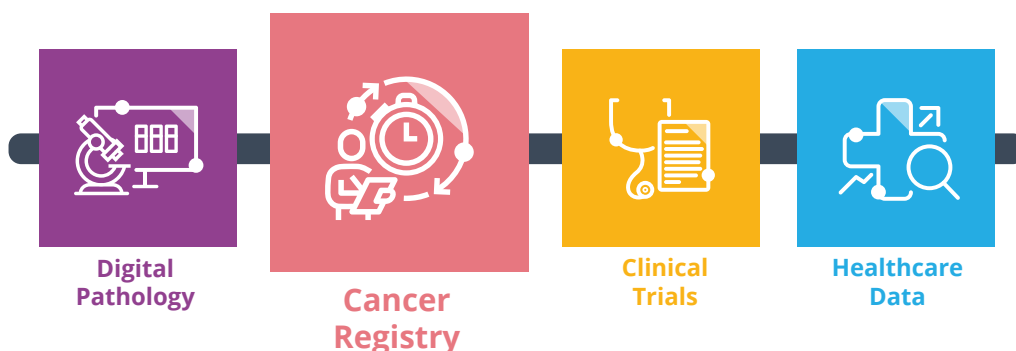
Dr. Juanita Pratt
Manager, Cancer Registry Operations and
Clinical Documentation and Treatment Records
UC Davis Comprehensive Cancer Center, California



Pathology v4.0 NHS Conformance Consultations

<http://inspirata.link/Pathv4>

Assisting NHS pathology, medical record, and cancer services departments automate their abstraction processes, book time with one of our registry automation experts today for a one-to-one consultation on strategies to help you achieve conformance.



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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