The NICR Staging Tool
A Rule-based Cancer Staging Application, Freely Available to Cancer Registries

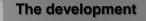G Napolitano[1,2], E Ranaghan[1], R Middleton[1], A Gavin[1]

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Background

• Correct, consistent staging is important for predicting cancer survival and population-based research but also for measuring treatment effectiveness and outcomes for cancer patients.

•TNM and other staging classification systems can be complex and encourage practitioners to use simplified versions (see diagram and table below for N staging of breast cancer).

Detail of N3 classification for breast cancer	
pN3a	Metastases in ≥10 axillary lymph nodes (at least 1 tumor deposit >2.0 mm). OR Metastases to the infraclavicular (level III axillary lymph) nodes.
pN3b	Metastases in clinically detected ipsilateral internal mammary lymph nodes in the presence of one or more positive axillary lymph nodes; OR Metastases in >3 axillary lymph nodes and in internal mammary lymph nodes with micrometastases or macrometastases detected by sentinel lymph node biopsy but not clinically detected.
pN3c	Metastases in ipsilateral supraclavicular lymph nodes.

Our objectives: to enhance the _adoption_ and the _standardisation_ of staging systems in cancer registries.

The development

• We used our own resources to develop a staging tool software, with the intent to make it available and free to use to as many cancer registries as possible.

•We liaised with Springer Healthcare, LLC, to purchase licensing permissions

•We are collaborating with the IARC/WHO Global Initiative for Cancer Registry Development (GICR) in low- and mid-income countries to increase availability and usability.
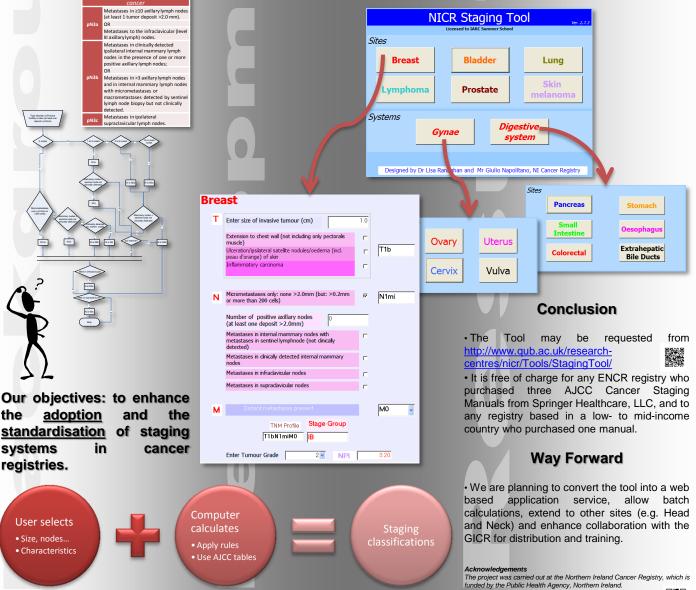
The tool

• The tool is an MS Access database with VBA coding and a graphical user interface.

•It calculates TNM and other site-specific cancer staging classifications from basic features of the patient's disease, entered by the user in a controlled fashion.

•The algorithms illustrated in the AJCC Cancer Staging Manual, v.7, were encoded in the software and staging tables provided by Springer were embedded in the tool.

•The tool can be used to stage 16 cancer sites/types (see illustration below).

Conclusion

• The Tool may be requested from http://www.qub.ac.uk/research-centres/nicr/Tools/StagingTool/

• It is free of charge for any ENCR registry who purchased three AJCC Cancer Staging Manuals from Springer Healthcare, LLC, and to any registry based in a low- to mid-income country who purchased one manual.

Way Forward

• We are planning to convert the tool into a web based application service, allow batch calculations, extend to other sites (e.g. Head and Neck) and enhance collaboration with the GICR for distribution and training.

User selects
• Size, nodes…
• Characteristics

Computer calculates
• Apply rules
• Use AJCC tables

Staging classifications

…and don't forget to visit our stand!