Understanding NHS cancer data

iMalthus – extending the Malthus cancer treatment demand model

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Upgrading the Malthus programme – used nationally to predict demand for radiotherapy – iMalthus offers higher accuracy, better reporting and faster results, providing a valuable tool to NHS Trusts.

With over 120,000 cancer patients undergoing radiotherapy treatment every year in the UK, the ability to predict the demand for radiotherapy is an important factor in the smooth running of NHS Trusts.

The original Malthus tool uses information on treatment schedules, combined with cancer incidence statistics from the National Cancer Intelligence Network, to predict demand for radiotherapy across England. Developed by researchers at the University of Surrey and Cambridge University Hospitals NHS Foundation Trust, in collaboration with the National Cancer Action Team, the tool has become a national standard across NHS Trusts, with NHS commissioners required to use the system to justify purchases of new radiotherapy equipment.

The IAA project was aimed at developing an enhanced version of the tool – iMalthus – by integrating research code into the clinical version, providing a seamless pathway for the tool to be upgraded. At the same time, a number of improvements were added, including a data refresh which enables users to run simulations at local level, and the option to export data from the tool directly to Microsoft Excel, enabling more efficient reporting.

Test results of iMalthus at Addenbrooke's Hospital have been very successful: in fact , the enhanced tool runs faster than the clinical version, rendering the clinical version essentially obsolete.

Malthus – Monte Carlo application for local radiotherapy treatment and hospital usage statistics.