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## Queen Elizabeth Hospital

*Isansys is currently working with oncologists at Queen Elizabeth Hospital in Birmingham to identify the early signs of sepsis in chemotherapy patients. The objective of this work is to develop early warning indicators of sepsis to allow community interventions well before these patients present with late stage sepsis.*

**I**sansys has developed a remote monitoring tool, designed to be worn at all times by the patient for 30 days following chemotherapy, and which is capable of constant monitoring of key indicators of sepsis, in particular in relation to variation in body temperature. The device would connect via a mobile gateway (possibly a smartphone or tablet) wirelessly to a hub, likely to be situated in the relevant acute hospital. The hub provides constant monitoring with alerts generated by algorithms in response to any readings outside defined ranges.

This enables the secondary care team to have very early warning of the patient's possible deterioration. They can then contact the patient, and ask them to attend hospital for treatment very early in the progression of their condition. This has the potential to halt the progression of sepsis in its early stages, potentially allowing more patients to be successfully be treated for neutropenic sepsis without requiring admission to hospital, reducing hospital stay for those who are admitted, and significantly improving outcomes.

**T**his study funded by the Small Business Research Initiative (SBRI) Healthcare and QEBH, comprises two phases: (i) patients who have been admitted with suspected neutropenic sepsis will be monitored (digitised) in hospital in order to obtain base-line data sets; (ii) patients at home will be continuously monitored for a three week period following chemotherapy treatments.

