Personalised medicine in sepsis

Sepsis is the most common reason for admission to general ICU and mortality rates remain high. Results from clinical trials have generally shown no difference between different treatment groups. In part this reflects the huge heterogeneity of this clinical syndrome and that some therapies may benefit some, but not all, septic patients.

In this presentation we will review recent studies that aim to identify distinct but more homogeneous subgroups of septic patients. In particular we will look at how genome-wide analysis has identified patients who may have better outcomes in pneumonia and may have identified potentially new therapeutic targets.

We will also review recent transcriptomic studies that have identified subgroups of patients based on RNA profiles (Sepsis Response Signatures). There is a consistent signal that some patients have an immune-supressed phenotype and have a poor outcome. This has promise as the start for more personalised therapy in sepsis.