UNIVERSITY OF LIVERPOOL

Enterprise: Licensing & Ventures

Palliative Care indicator tool

Creating a biomarker-based test to predict when a terminal cancer patient is in the last weeks of life.

Unmet need

An estimated 90% of people who die in the UK need palliative care, with cancer patients being most likely to benefit from it. End of life estimates are based on clinician judgment, and is very subjective. Early recognition that a person may be dying enables an individual care plan to be developed, including where to spend their final days—currently almost half of people die in hospital.

The lead inventor is a palliative care clinician, recognising the need for an objective test that predicts end of life, to allow terminal patients to end their life on their own terms.

Technology

University of Liverpool researchers and clinicians have developed a biomarker-based assay to predict end of life in terminal cancer patients. The model was developed using urine samples from ~100 terminal patients, and validated on a separate cohort of ~50 patients.

The research team has recently been awarded funding to acquire samples from 1300 terminal patients, which will provide strong validation of the test as a clinical tool. They are working with a commercial partner (MedTechToMarket) to develop the test, validate findings and navigate medical device regulations.

Benefits

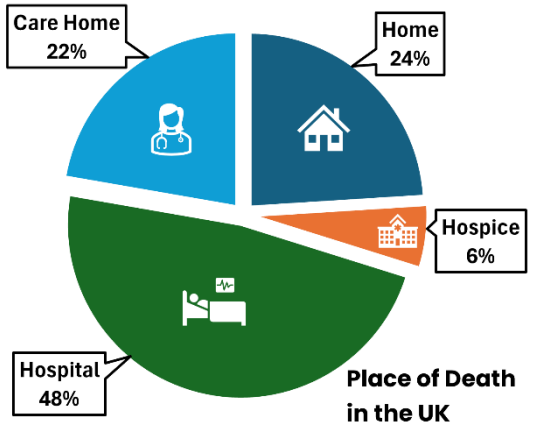
There is currently no diagnostic test to predict end of life; instead this is performed as subjective guesswork by clinicians.

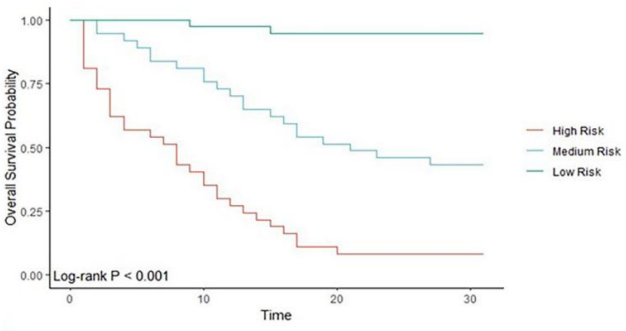
Intellectual property

Patent for the biomarkers (WO2023180753A1), priority date 24/3/22.

Opportunity

This technology shows promise, is patented and addresses a largely unmet need. Timeliness is highlighted by the End of Life Bill going through the House of Lords.





Percent Survival for each risk group at different time points (number at risk)			
	10 day	20 day	30 day
Low Risk (37)	97% (36)	95% (35)	95% (35)
Medium Risk (37)	81% (30)	51% (19)	43% (16)
High Risk (37)	41% (15)	11% (4)	8% (3)

Predictive value of model. Survival rates of individuals based on risk grouping by the biomarker model.