LETTER

**PREDICTING THE LAST DAYS OF LIFE WILL CHANGE CLINICAL PRACTICE**

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Dying patients can have distressing symptoms and medications exist to control them. It needs to be actively managed – there is no such thing as nothing more can be done. Yet, recognition of dying is difficult. No objective diagnostic test exists and there is often hug uncertainty. Knowing if a person is dying is crucial for patients, their families, the medical teams and clinicians to plan and provide the best care.

The current standard to predict dying is the best guess of at least two members of the Multi-Disciplinary Team. Physicians predictions are frequently inaccurate and overoptimistic (1, 2). A systematic review that included 1.2 million patients, demonstrated that non-beneficial antibiotics, cardiovascular, digestive and endocrine treatments to the dying occurred in 11-75% (mean 38%) (3).

Despite decades of cancer research little is known about how people die from cancer (4). Research into the dying process is unexplored; the Neuberger report recommended funding be made available to develop the evidence base (5).

Our research explores the biology of dying and aims to identify biomarkers for different dying phases within the last month of life. Feedback questioned the need for biomarkers of the process and that they would not be clinically useful or change clinical practice.

In response, we did a short local survey of senior palliative medicine physicians in the UK North West coast region of their opinion about a test for dying. We sent the survey to 55 physicians and got 27 responses (26 Consultants; 1 Associate Specialist).

The survey (see Table) confirmed the difficulty (difficult to impossible) recognizing the last 2 weeks (81%) and days of life (41%) and their importance (very important or important) – 93% for both. A test for the dying process would change clinical practice, 67% last days 75% last 2 weeks. Clinical practice would change frequently (daily/weekly); 83% last days, 91% last 2 weeks. A test would lead to better symptom control, 37% last days and 44% last 2 weeks; decreased investigations, 78% both time scales; more informed communication, 85% both timescales; and facilitate a person’s preferred place of care and dying, 78% last days, 81% last 2 weeks.

The survey raised concerns any test developed would need to address. How to decide when to discuss a test for dying with patients and their families’; getting consent for the test is likely to be challenging’; and the test could be done on everyone, to screen for dying; however, this raises ethical questions.

Recognition of a dying person will change management by:

1. Allow a dignified death; including help people achieve their preferred place of care and death.
2. Decreased patient, patient, family and clinician uncertainty and distress towards the end of life.
3. Improved communication about dying between clinicians, patients and family and as a result helping the bereavement process.
4. Improved symptom control e.g. management of terminal agitation.
5. Decreased inappropriate investigation and interventions.

Overall, these five changes will produce significant cost savings to NHS through better care or interventions for both patient and family.

To achieve these changes recognition of dying needs to improve. Developing identified biomarkers into a test that predicts the dying process needs to investigate the biochemical mechanisms involved, be validated in different cohorts and explore the health economics. Our survey highlights the need for exploration of the ethical issues and development of a clinical decision pathway.

The biology of how we die is an important but neglected research area. It must be a research priority. A test predicting the last days of life is important. It will change clinical practice and improve the care dying people receive.

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|  | **Last 4 days of life** | **Last 2 weeks of life** |
| Ability to recognize this phase is considered difficult to impossible | 41% | 81% |
| Important or very important to be able to predict this phase | 93% | 93% |
| Knowing this phase would (Yes or maybe):   * Affect clinical practice * Daily/weekly? | 96%  81% | 100%  91% |
| Knowing this phase would:   * Lead to better symptom control * Decreased investigations/futile interventions * More informed communication * Facilitate preferred place of care and death | 37%  78%  85%  78% | 44%  78%  85%  81% |

**Table 1: Summary Palliative Medicine clinicians’ opinions about a test dying in the last 4 days and 2 weeks of life.**

**REFERENCES**

1. Glare P, Virik K, Jones M, Hudson M, Eychmuller S, Simes J, et al. A systematic review of physicians’ survival predictions in terminally ill cancer patients. Bmj.2003;327(7408):195-8.
2. White N, Reid F, Harris A, Harries P, Stone P. A Systematic Review of Predictions of Survival in Palliative Care: How Accurate Are Clinicians and Who are the Experts? PloS one. 2016;11(8): e0161407.
3. Cardona-Morrell M, Kim J, Turner RM, Anstey M, Mitchell IA, Hillman K. Non-beneficial treatments in hospital at the end of life: a systematic review on extent of the problem. Int J Qual Health Care. 2016;28(4):456-69.
4. Reid VL, McDonald R, Nwosu AC, Mason SR, Probert C, Ellershaw JE, et al. A systematically structured review of biomarkers of dying in cancer patients in the last month of life; An exploration of the biology of dying. PloS one. 2017;12(4): e0175123.
5. More care, less pathway: a review of the Liverpool Care Pathway. London: Department of Health UK; 2013.