Deprescribing statins at end-of-life in cancer patients?

Executive summary

As cancer patients approach end-of-life, there can often be a treatment paradigm shift to that of palliative care. Accordingly, medications prescribed to patients with advanced cancer should be reviewed regularly and those unlikely to provide benefit, such as preventative medications (specifically; statins), can be discontinued[1]. This brief describes if/when this is occurring in the Irish oncology setting.

Introduction

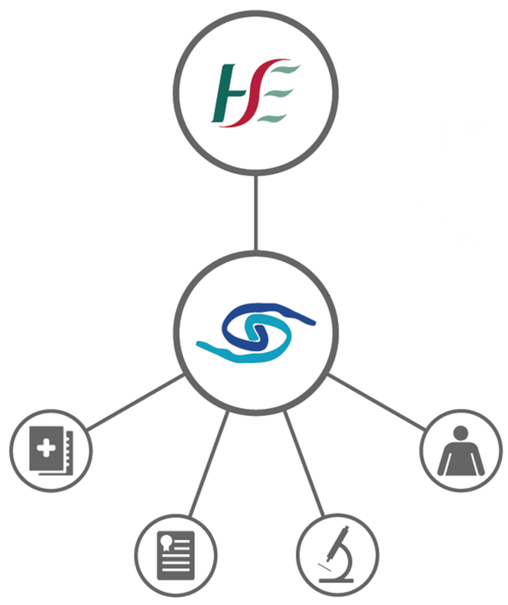
The protective effects of statins accrue over time, and the potential benefit of statin use in those with reduced life expectancy may be limited to patients at high-risk of a cardiovascular event[1], and should be considered for **discontinuation** in those who are unlikely to benefit.

Several studies have investigated statin use in those with reduced life expectancy, which suggest that many patients will cease statin treatment by the time of death[2–6]. However, these are largely cross-sectional studies reporting statin exposure at the time of death, and do not indicate when patients are most likely to cease this treatment.

Two of the most prevalent invasive cancers are breast and colorectal cancer[7]. This brief describes the changes in statin exposure prior to death in patients in Ireland with breast or colorectal cancer[8].

Methods

The study was carried out using data from the **National Cancer Registry Ireland (NCRI)**, which are linked to prescription dispensing records from Ireland's **Health Services Executive (HSE) Primary Care Reimbursement Services (PCRS)** pharmacy claims database.



Statistical models were used to estimate relative risks (RR) and risk differences (RD) with 95% confidence intervals (CI) for;

(i) initiating statin treatment and

(ii) continuing statin use in cases versus controls;

In all patients diagnosed with stages I–III, **invasive breast or colorectal cancer**, between 1 January 2001 and 31 December 2009.

(See published article for full methods/results.)

Results

One month prior to death, over **50%** of breast cancer patients and over **40%** of colorectal cancer patients were still receiving a statin prescription

Three months prior to death, **70%** of breast cancer patients and over **60%** of colorectal cancer patients were still receiving a statin prescription

Results

There is a decline in statin use prior to death, and this may be the result of a change in the health care priorities of the patient, and/or reduction in the pharmacotherapeutic burden[10].

However, the number of patients initiating statin use did not differ between those who died of their cancer and those who did not. This suggests that a life-limiting diagnosis does not affect the prescribing of preventative medications.

In addition, **a large proportion of patients will still receive a statin prescription in the months close to death**, and it should be questioned whether this is appropriate.

Recommendations/implications

The results of this study have important implications for the shared decision making process at the end of life, whereby there may be an opportunity to re-evaluate medication burden in this patient group. It also highlights the need for clear clinical guidelines for medication deprescribing, when clinicians are presented with such a scenario.

Discussion

Recently, a study showed that stopping statin therapy in patients with a limited life expectancy was safe for the patients, with no significant difference in the time to cardiac event, and may be associated with improved quality of life[11]. Although there are currently no clinical guidelines on ceasing statin treatment, this clinical trial suggests that it is safe to do so in patients with limited life expectancy.

Given the **lack of clinical guidelines** on statin therapy discontinuation in the Irish setting, these studies may prove useful in the clinical decision making process in regards to medication received by patients who are approaching death.

Suggested Sources

- ❖STOPP START Toolkit Supporting Medication Review (NHS Cumbria, 2013)
- ❖The Beers Criteria to identify potentially inappropriate medication use in older adults (American Geriatrics Society, 2015).
- ❖The 'OncPal deprescribing guideline' (Lindsay, J., Dooley, M., Martin, J. et al. Support Care Cancer (2015)).

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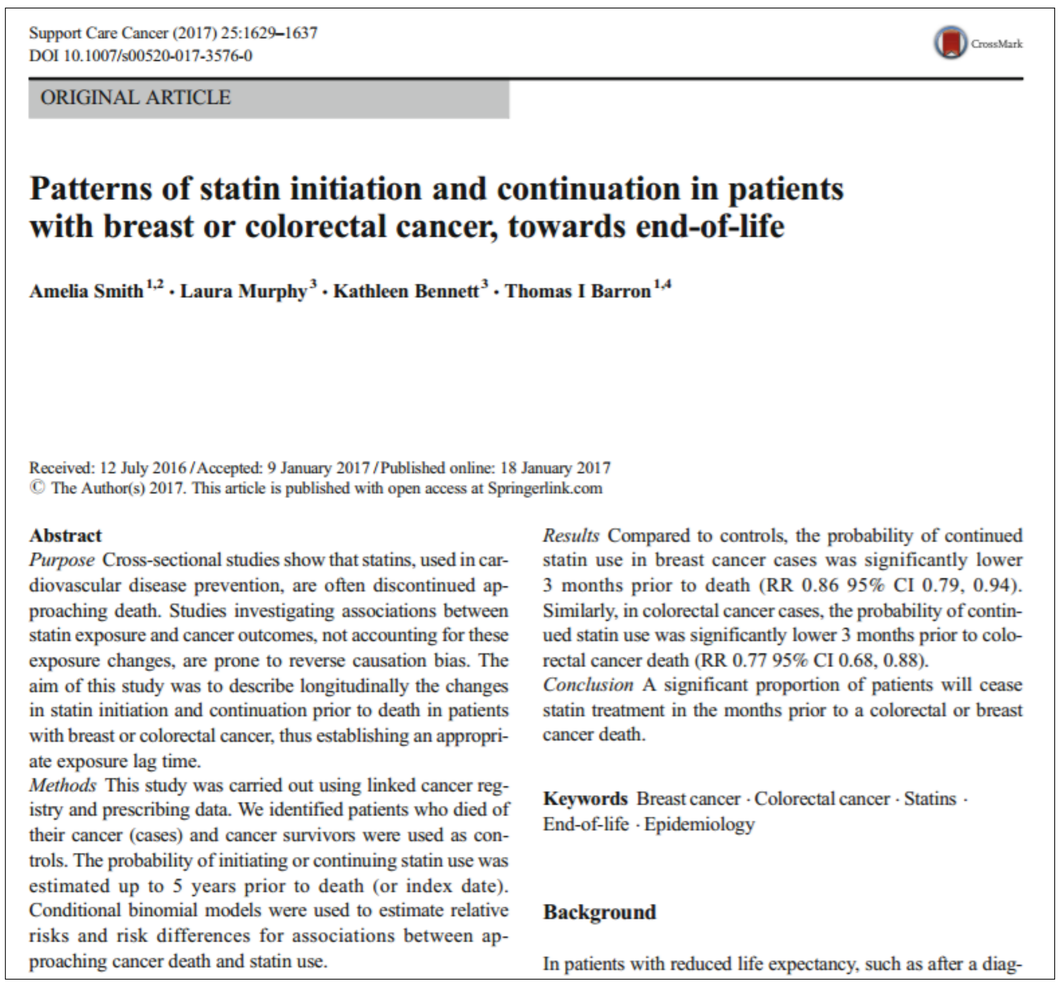
Published study associated with this brief

Access the study here



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ORIGINAL ARTICLE

Patterns of statin initiation and continuation in patients with breast or colorectal cancer, towards end-of-life

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Abstract
Purpose Cross-sectional studies show that statins, used in cardiovascular disease prevention, are often discontinued approaching death. Studies investigating associations between statin exposure and cancer outcomes, not accounting for these exposure changes, are prone to reverse causation bias. The aim of this study was to describe longitudinally the changes in statin initiation and continuation prior to death in patients with breast or colorectal cancer, thus establishing an appropriate exposure lag time.
Methods This study was carried out using linked cancer registry and prescribing data. We identified patients who died of their cancer (cases) and cancer survivors were used as controls. The probability of initiating or continuing statin use was estimated up to 5 years prior to death (or index date). Conditional binomial models were used to estimate relative risks and risk differences for associations between approaching cancer death and statin use.
Results Compared to controls, the probability of continued statin use in breast cancer cases was significantly lower 3 months prior to death (RR 0.86 95% CI 0.79, 0.94). Similarly, in colorectal cancer cases, the probability of continued statin use was significantly lower 3 months prior to colorectal cancer death (RR 0.77 95% CI 0.68, 0.88).
Conclusion A significant proportion of patients will cease statin treatment in the months prior to a colorectal or breast cancer death.

Keywords Breast cancer · Colorectal cancer · Statins · End-of-life · Epidemiology

Background

In patients with reduced life expectancy, such as after a diag-

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