

## FAST FACTS AND CONCEPTS #322 DISCONTINUATION OF STATINS AT THE END OF LIFE

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Polypharmacy can lead to disability, hospitalization, and even death, as the number of medications is an important predictor of harm, especially in the elderly (1,2). Statins are commonly prescribed for primary prevention (reducing the chance of disease before it happens) or secondary prevention (slowing down the progression of illness) of atherosclerotic cardiovascular disease (ASCVD) (3,4). This *Fast Fact* will outline care strategies on when to discontinue statin therapy in a palliative care setting. See *Fast Facts* #236, 258, 278, and 321 for more information on deprescribing.

**Clinical Background** Beyond prevention of ASCVD, statins have shown other benefits:

- Reduction of refractory angina within hours for patients with acute coronary syndrome (ACS) (5,6).
- Reduction in stroke risk for patients with ASCVD (7,8).
- Observational data that ischemic stroke patients may have better functional outcomes (9).

Because statins are often prescribed indefinitely and the indications accrue as persons age, the prevalence of statin use increase with age. Despite questionable clinical benefit in patients over 75 and in patients with a limited life expectancy, most patients still receive statins in the last year of life (10,11).

**Benefits of Statins in End of Life Care** Statins have been associated with less symptomatic ischemia, fewer strokes, and improved one-year mortality when used in response to ACS (12,13). It has been hypothesized that the treatment benefits of reducing refractory angina from ACS dissipate immediately when statins are discontinued (14). Therefore, patients with recent or symptomatic cardiovascular events may benefit from continued use of statins at the end of life when projected life expectancy is beyond a few months. Other patients who may benefit from continued use of statins include patients who recently underwent a percutaneous coronary intervention (e.g. cardiac stent).

**Risks of Statins in End of Life Care** When used to reduce the future risk of ASCVD for primary or secondary prevention, benefits from statin use take over two years to accrue (15-17). Therefore, continuing statins in patients with less than two years to live for preventative purposes would theoretically offer little benefit. A multicenter randomized-controlled trial evaluated the safety, clinical impact, and cost of discontinuing statins in hospice patients taking statins for ASCVD prevention (18). In this population, discontinuing statins resulted in reduced cost and improved quality of life (QOL). Although it was not powered to fully determine effect on survival, discontinuing statins did not appear to shorten life nor was it associated with more ACS events (18). Other concerns with statin use at the end of the life include:

- High prevalence of dysphagia in advanced illness;
- Polypharmacy leading to unanticipated drug interactions and pill burden;
- Statin associated side effects such as musculoskeletal pain, gastrointestinal distress, and rhabdomyolysis are more common among the elderly and comorbid end-of-life conditions such as hypothyroidism, renal or hepatic insufficiency, hypoxia, and electrolyte disturbances (4,11,19).

**Communication Strategies** Patients may develop emotional distress, anxiety, or feelings of abandonment associated with an isolated recommendation to discontinue statins (4). It is important to discuss statin discontinuation as part of a larger discussion about prognosis, otherwise the recommendation may be confusing, if not upsetting to patients and families. See *Fast Fact* #321 for more general guidance on discussing deprescribing. Specific phrasing with regards to the discontinuation of statins for primary prevention may be: *“I see that you are still on a statin. The intent of this medication has been to reduce your risk of a heart attack or a stroke years into the future. Considering your underlying illness, I am worried you will not live long enough to receive further benefit from continuing this medication. In fact, it can cause a lot of side effects and I think you will feel better without it.”*

**Summary** Evidence suggests that stopping statins is safe and prudent in patients taking them for ASCVD prevention and an estimated prognosis of less than two years. The data is less clear for patients with a prognosis of 1-2 years who are taking statins for secondary prevention. Clinicians should maintain

a transparent, patient-centered approach when discussing risks versus benefits in this patient population. Patients enrolled in hospice with a terminal diagnosis related to a recent ACS may have some reduction in angina with continued statin use when prognosis is felt to be months. But clinicians should consider discontinuing statins to reduce the risk of adverse effects and polypharmacy when prognosis is felt days to weeks.

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