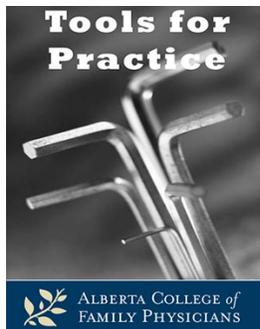


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## Statins and the elderly: The Who, What and When?

**Clinical Question: Which elderly patients should be offered what type of statin for cardiovascular disease (CVD) prevention?**

**Bottom-Line: For primary prevention age 65-75, consider moderate-potency statins (example 10-20mg atorvastatin) for moderate or higher risk individuals ( $\geq 10\%$  risk of CVD over 10 years based on Framingham score). No evidence to start statins in primary prevention patients  $> 75$ . In secondary prevention age 65-82, there is evidence for moderate-potency (to high, as tolerated) statin. Pravastatin should likely not be first-line given the possible cancer signal for those  $> 65$ .**

### Evidence:

- Secondary Prevention: One systematic review of nine randomized controlled trials (RCTs), 19,569 patients aged 65-82 years, ~5 years follow-up.<sup>1</sup> Statistically significant reductions in:
  - All cause mortality: Relative Risk (RR) 0.78 (0.65-0.89).
    - Estimated Number Needed to Treat (NNT)=28.
  - Other outcomes: Coronary heart disease mortality (NNT=34), non-fatal myocardial infarction (NNT=38), stroke (NNT=58).
- Primary Prevention: One systematic review of eight RCTs, 24,674 patients aged 65-82 years, ~3.5 years follow-up.<sup>2</sup> Statistically significant reductions in:
  - Myocardial infarction: RR 0.61 (0.43-0.85), NNT 84.
  - Stroke: RR 0.76 (0.62-0.93), NNT 143.
  - No statistically significant reduction in death or CVD death.
- Harms: Musculoskeletal adverse events,<sup>3</sup> Number Needed to Harm=77 (average RCT 3.4 years).
  - Cancer: Meta-regression<sup>4</sup> of pravastatin trials suggests cancer incidence (multiple types<sup>5</sup>) increases in older patients:
    - Risk Ratio: 0.92 at age 55, 1.06 at age 65, and 1.22 at age 75.
      - May be spurious as older patient numbers low.
    - Cancer incidence not increased with other statins.<sup>6,7</sup>

**Context:**

- Meta-analyses of patients  $\geq 65$  are primarily from subgroups of RCTs and include few  $>75$  (especially in primary prevention). Most used moderate-potency statin therapy (pravastatin 40mg or atorvastatin 10mg).<sup>1-3</sup>
- For patients  $>75$ , US guidelines<sup>8</sup> advise:
  - Offering statins to patients with CVD.
  - Data does not clearly support use in those without CVD.
  - Age is not an indication to stop statins in those tolerating it.
- Canadian guidelines<sup>9</sup> advise clinical judgement guide therapy.
- Screening for lipid therapy should likely end at 75:
  - Risk calculators<sup>10</sup> generally do not include age  $>75$  and there is no evidence for primary prevention  $>75$ .

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**Disclosure:**

Authors do not have any conflicts to disclose.

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