# Statins Don't Alter Cancer Risk, Metaanalysis Finds

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Statins neither raise nor lower the risk of cancer or cancer mortality, according to a metaanalysis of 26 randomized clinical trials.

Several retrospective studies have suggested that statins reduce the risk of developing cancer by as much as 50%. However, three metaanalyses have failed to confirm that statins exert a protective effect against cancer.

To shed light on the issue, Krista M. Dale, Pharm.D., of the University of Connecticut School of Pharmacy, Hartford, and her associates conducted a much larger metaanalysis of 26 randomized clinical trials involving 86,936 subjects. The participants were followed up for 2-10 years for the development of cancer.

The trials included only placebo-controlled or standard treatment–controlled studies enrolling a minimum of 100 subjects each. Most of these trials assessed the ability of statins to prevent coronary artery disease, but all examined cancer diagnosis or cancer death as a primary or secondary end point.

Statins did not reduce the risk of cancer or of cancer death, Dr. Dale and her associates said (JAMA 2006;295:74-80).

When six major subtypes of cancer—breast, colon, gastrointestinal, prostate, respiratory tract, and skin cancers—were considered individually, statins did not reduce the risk of any of these types.

Similarly, when pravastatin, simvastatin, atorvastatin, cerivastatin, fluvastatin, and lovastatin were considered individually, none of the agents reduced the risk of cancer or cancer death.

And when the metaanalysis was narrowed to assess natural versus synthetic statins and low-lipophilic versus high-lipophilic statins, the results did not change.

"We thought hydrophilic statins, with their impaired ability to penetrate biological membranes, might provide different effects than lipophilic statins, which readily enter cells, but this was not evident in our study. Similarly, naturally derived statins have a markedly different structure than synthetic statins, but neither type affected the results," the investigators noted. ■

## *Intensive Statin Therapy Augments Stroke Prevention*

DALLAS — Intensive statin therapy appears to further decrease the risk of cerebrovascular events beyond the already significant reduction achieved with standard-dose statins, Dr. Jessica L. Mega reported at the annual scientific sessions of the American Heart Association.

She presented a metaanalysis of three major randomized trials of intensive- versus moderate-dose statins featuring rates of stroke and transient ischemic attacks as a predefined end point. In these three studies totaling nearly 19,000 randomized patients, the cerebrovascular event (CVE) rate was 3.5% with standard-dose statin therapy and 2.9% with high-dose statins. That works out to a 17% relative reduction in the risk of CVEs overall and a 21% decrease in the relative risk of stroke with intensive- compared with moderate-dose statin therapy.

At least six other studies have shown that standard-dose statins reduce the incidence of CVEs compared with placebo, added Dr. Mega of Massachusetts General Hospital, Boston.

The observed stroke prevention benefit with intensive statin therapy did not appear to result from the greater degree of LDL lowering achieved with these drugs. Indeed, patients who experienced a CVE had LDL levels similar to those who did not.

A clue as to the mechanism of benefit comes from the Pravastatin or Atorvastatin Evaluation and Infection Therapy (PROVE-IT) trial, in which 4,162 patients were randomized to 40 mg/day of pravastatin or 80 mg/day of atorvastatin. In that study, patients who experienced a CVE had significantly higher C-reactive protein levels 30 days into treatment than did those who did not experience a CVE, by a margin of 2.7 mg/L vs. 1.9 mg/L. It seems likely that the anti-inflammatory and vascular-stabilizing properties of the statins account for the reduction in strokes, Dr. Mega said.

**—Bruce Jancin**