

Rosiglitazone vs. Pioglitazone — What Are the Odds?

Odds for myocardial infarction, congestive heart failure, and overall mortality were higher with rosiglitazone.

The two thiazolidinediones available to treat type 2 diabetes in the U.S. are pioglitazone (Actos) and rosiglitazone (Avandia). Rosiglitazone raises risk for ischemic cardiovascular events, and both drugs raise risk for congestive heart failure (CHF). In a meta-analysis of 16 observational studies involving 810,000 patients (mean age, 54–76), investigators compared the effects of pioglitazone and rosiglitazone on risks for myocardial infarction (MI), CHF, and overall mortality in patients with type 2 diabetes.

Average follow-up ranged from 105 days to 7.1 years. Compared with pioglitazone, rosiglitazone was associated with significantly increased odds for MI (odds ratio, 1.16), CHF (OR, 1.22), and mortality (OR, 1.14).

Comment: Rosiglitazone is associated with increased odds for MI, CHF, and overall mortality compared with pioglitazone. The European Medicines Agency has recommended suspension of marketing authorization for rosiglitazone, whereas the FDA allows marketing with restrictions. Even though pioglitazone appears preferable to rosiglitazone, pioglitazone has its own risks, including CHF, fractures, and possibly bladder cancer. It is also expensive. According to editorialists, pioglitazone may be an acceptable alternative for patients with uncontrolled diabetes who cannot or will not take insulin, but they state that "this group is too small . . . to justify the position of pioglitazone as the eighth leading prescription drug in the United States, with total sales of \$3.4 billion in 2009."

— [Paul S. Mueller, MD, MPH, FACP](#)

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