# 1-Year Outcomes of Perioperative Beta-blockade in Patients Undergoing Noncardiac Surgery

**Purpose**: To evaluate cardiovascular outcomes when using metoprolol perioperatively in at-risk patients having non-cardiac surgery.

**Trial Design**: Phase 3, multi-center (191 sites, 23 countries), randomized, controlled, blinded. Metoprolol controlled release vs. placebo in at-risk patients having non-cardiac surgery. (metoprolol CR 100 mg 2-4 hours before surgery, 100 mg first 6 hours after surgery, and then 12 hours after post-op dose, 200 my daily X 30 days) N= 8351.

**Primary Endpoints:** CV Death, non-fatal MI, cardiac arrest 30 days after surgery

| 1 year | All-cause mortality | | CV mortality | | MI | | Stroke | | Revascularization | |
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| metoprolol | 10% | P=0.36 HR 1.16 | 4% | P= 0.37 HR 1.10 | 5% | P= 0.008 HR 0.78 | 2% | P = 0.14 HR 1.52 | 1% | P=0.004 HR 0.47 |
| placebo | 9% | | 4% | | 6% | | 1% | | 1% | |

At 1 year, patients who received perioperative beta-blockade for noncardiac surgery compared to placebo experienced more deaths and strokes, but there were fewer MI's and less need for cardiac revascularization.

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