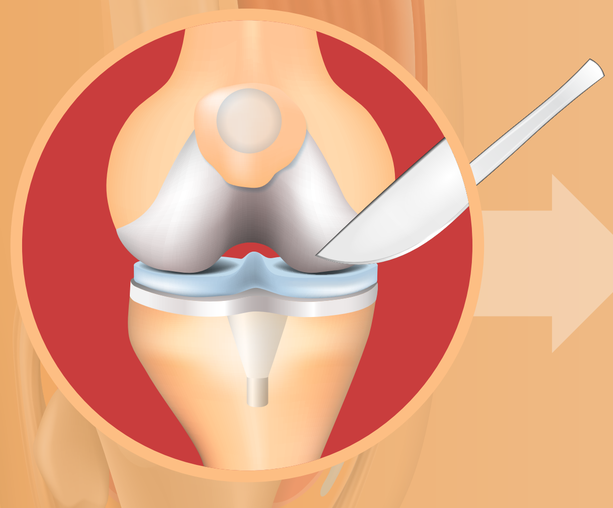
How Accurate Are the Surgical Risk Preoperative Assessment System Universal Calculators in Total Joint Arthroplasty?

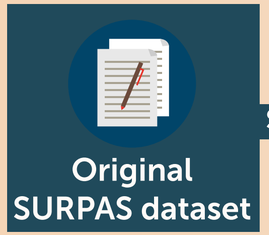
Surgical Risk Preoperative Assessment System (SURPAS) universal risk calculators have shown excellent overall performance



However, their accuracies must be tested for specific surgical interventions, such as total joint arthroplasty (TJA)

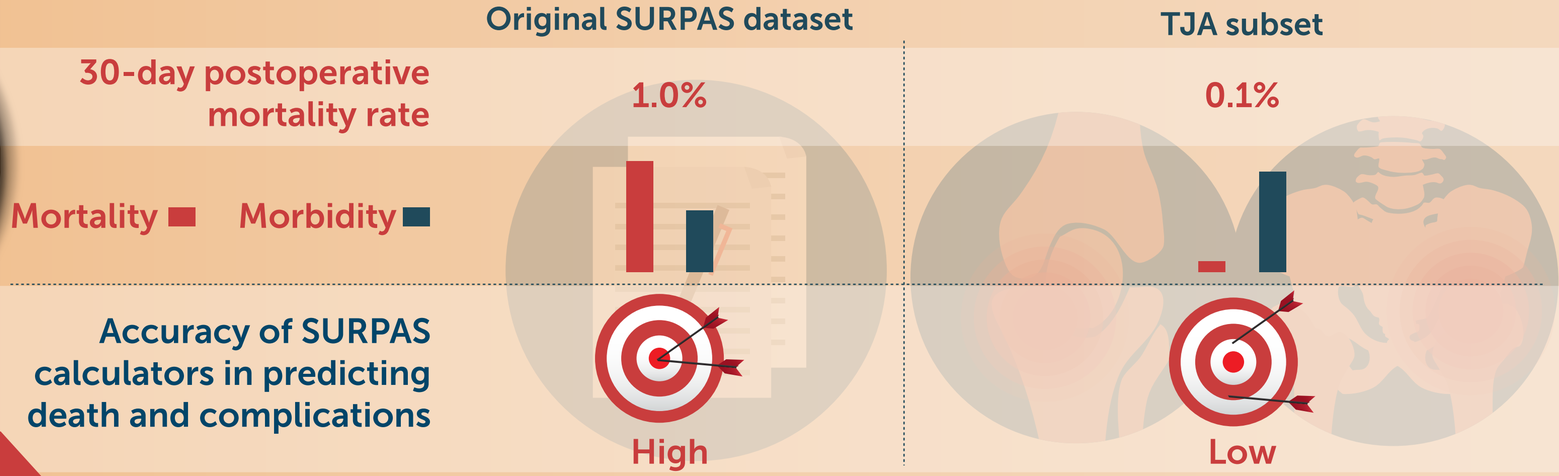
How accurate are the SURPAS models' predictions for patients undergoing TJA?

Data from the 2012 American College of Surgeons National Surgical Quality Improvement Program



Predictive accuracy of SURPAS assessed

- Mortality
- Overall morbidity
- Accuracy of predicting specific complications



- Universal SURPAS risk models have lower accuracies for TJA procedures than they do for the wider range of procedures in which the SURPAS models were originally developed. SURPAS model estimates must be evaluated for individual surgical procedures or within restricted groups of related procedures
- Given the substantial difference between observed and SURPAS-expected outcomes for TJA, universal perioperative risk calculators may not be accurate or reliable enough for clinical or administrative use
- Surgeons and healthcare administrators should use risk calculators developed and validated for specific procedures that are most relevant to each decision

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