**Supplemental Appendix 1: STS (Society of Thoracic Surgeons) VERSION 2.73 Definitions for postoperative outcomes**

*Complications*

Indicate whether a postoperative event occurred during the hospitalization for surgery. This includes the entire postoperative period up to discharge, even if over 30 days.

*Acute Kidney Injury,*

Indicate whether the patient had acute acute kidney injury*,* or worsening renal function resulting in one or both of the following

1. Threefold rise in serum creatinine from baseline or a creatinine level >4.0 mg/dL with a minimum rise of 0.5 mg/dL
2. A new requirement for dialysis postoperatively.

*Stroke*

Indicate whether the patient has a postoperative stroke (i.e., any confirmed neurological deficit of abrupt onset caused by a disturbance in cerebral blood supply) that did not resolve within 24 hours.

*Mortality*

Operative mortality includes: (1) all deaths, regardless of cause, occurring during the hospitalization in which the operation was performed, even if after 30 days (including patients transferred to other acute care facilities); and (2) all deathss, regardless of cause, occurring after discharge from the hospital, but before the end of the thirtieth postoperative day.

Data on outcomes were obtained from the adult cardiac surgery database. If a patient was discharged, they were given a 30-day appointment. Those who missed the 30-day appointment were contacted through phone by the society of thoracic surgery database coordinator to note the morbidity and mortality. State society of thoracic surgery coordinators also manage the Social Security Mortality Index to capture those who died within 30 days after cardiac surgery. This information was sent to the individual hospital.