

# C-50

## Cardiac Valve Replacement for Carcinoid Heart Disease

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**BACKGROUND:** Carcinoid syndrome causes degeneration of right heart valves, and provokes intraoperative carcinoid crisis in up to 30% of patients. We report the oncologic features and surgical outcomes of patients undergoing valve replacement for carcinoid degeneration at our institution.

**METHODS:** We reviewed our institution's database of patients with carcinoid tumor diagnosed from 2001 to present.

**RESULTS:** Of 577 patients, 25(4.3%) underwent cardiac operation: 16 CABG, 8 valve replacement (open); 1 aortic aneurysm repair.

Of valve repair patients the mean age at carcinoid diagnosis was 53.5±3.4 years; 63% were female. All had small bowel primaries and liver metastases.

Mean interval from carcinoid diagnosis to heart failure symptoms was 15.4±4.5 months, 16.1±4.4 months to the first abnormal trans-thoracic echocardiogram. On echocardiogram all patients had moderate-severe tricuspid regurgitation. Median pulmonary and mitral regurgitation were moderate-severe and mild-moderate respectively. None had aortic valve degeneration.

The indication for valve replacement was optimization for carcinoid tumor operation in 50%. Mean age at replacement was 55.12±3.2 years. Median preoperative New York Heart Association functional class was 3. All patients underwent tricuspid replacement (88% bioprosthetic). Six underwent pulmonary, and 2 mitral, valve replacement (100% bioprosthetic).

No patient had intraoperative carcinoid crisis, 2 had trouble weaning from cardiopulmonary bypass. All received intraoperative octreotide infusion (mean dose  $2421 \pm 356$  mcg.)

Median follow up was 17 months, with one perioperative death (stroke). Three patients required re-operation for carcinoid disease in the bioprosthetic valve.

**CONCLUSION:** This is the largest modern series of valve replacements for carcinoid valve disease. Our data suggest that these patients can safely undergo valve replacement both before and after debulking of intrabdominal disease.