

## Characteristics of cancer patients and survivors undergoing transcatheter aortic valve replacement

Aarti A. Patel<sup>1</sup>, Allan Chen<sup>1</sup>, Michael G. Fradley<sup>1</sup>, Tien Nguyen<sup>2</sup>, Gregory Coffman<sup>3</sup>, Allen Brown<sup>3</sup>, Vishal Parikh<sup>1</sup>, Fadi Matar<sup>1</sup>, John Sullebarger<sup>1</sup>, Robert Hooker<sup>1</sup>, Christiano Caldeira<sup>1</sup>, Arthur J. Labovitz<sup>1</sup>

<sup>1</sup>University of South Florida Department of Cardiovascular Sciences <sup>2</sup>Tampa General Hospital <sup>3</sup>University of South Florida Department of Internal Medicine

Presenting author: Aarti A. Patel, [apatel15@health.usf.edu](mailto:apatel15@health.usf.edu)

Character count: 1991

**Introduction:** Transcatheter aortic valve replacement (TAVR) has emerged as a treatment option for severe aortic stenosis in high risk patients. The characteristics of cancer (CA) patients undergoing TAVR has not been previously described. This study sought to identify the effect of TAVR on various echocardiographic and clinical parameters in this population.

**Methods:** 100 consecutive patients who underwent successful TAVR for severe aortic stenosis were evaluated. Clinical and echocardiographic data were extracted pre-TAVR, in-hospital and at 30 days.

**Results:** In the total cohort, mean age was 84 years, 49% were female, and 87% were of Caucasian race. Six patients held a cancer diagnosis, including 3 with prior breast CA, 2 with prior lung CA and 1 with esophageal CA. Two of these patients were undergoing treatment for secondary CA (plasma cell leukemia and lung adenocarcinoma). Of those with CA, 33% and 83% had undergone prior chemotherapy and radiation therapy, respectively. There was a statistically significant difference in both pre- and post-TAVR left ventricular ejection fraction (LVEF) in non-CA patients compared to the CA group (53% vs 33%,  $p < 0.005$ ; 56% vs 34%,  $p < 0.001$  respectively). Length of stay was 11 days vs 13.6 days in the non-CA vs. CA patients. There were 5 total deaths within 30 days and all were in non-CA patients. The table below shows post procedure events between the two groups.

Post TAVR	Non-cancer (M1) vs cancer (M2) post TAVR in hospital (n)		Non-cancer (M1) vs cancer (M2) post TAVR 30 days (n)	
	M1 (94)	M2 (6)	M1 (89)	M2 (6)
Major bleed	17	1	5	0
Heart Failure	0	0	2	0
Cerebrovascular event	0	0	1	0

**Conclusions:** Survivors and current cancer patients with severe aortic stenosis and elevated surgical risk are often evaluated for TAVR, but may not be considered ideal candidates due to a cancer diagnosis. Although in our study these patients presented with significantly lower pre and post-TAVR LVEF, there was decreased mortality and no significant difference in major post-procedure complications or hospital length of stay when compared with non-cancer patients. Further studies are needed to identify long term trends and factors associated with optimal clinical outcome in the oncologic population after TAVR.