83193 | Sapien 3 Ultra Compared with Sapien Ultra Resilia Over 2 Years

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Background: The Sapien 3 Ultra Resilia (S3UR) valve incorporates a novel anti-calcification process, updated leaflet suspension in 20 and 23-mm sizes, and a 40% taller PET sealing skirt compared to the Sapien 3 Ultra (S3U). We evaluated gradients and perivalvular leak (PVL) in patients undergoing TAVR with S3UR versus the prior-generation S3U at our center.
Methods: Data were collected at 1 day, 30 days, 1 year, and 2 years. Clinically significant PVL was defined as moderate or greater. Gradients were compared by valve size and PVL rates between groups overall (χ^2; $p<0.05$).
Results: Data on 20- and 29-mm valves were limited and excluded. S3UR (n=39) showed lower peak and mean gradients than S3U (n=75) at all time points, persisting in 23-mm valves but only at 30 days in 26-mm valves. Notably, 23-mm S3UR had gradients comparable to 26-mm S3U. PVL rates were lower with S3UR at all time points.
Conclusion: S3UR demonstrated lower gradients than S3U, with 23-mm S3UR achieving gradients comparable to 26-mm S3U despite larger EOA. This likely reflects enhanced leaflet mobility, with sustained benefit over 2 years. PVL was also reduced with S3UR, consistent with its more robust sealing skirt. Further study is needed to define clinical impact and durability.

		23 mm S3U (mmHg)	23 mm S3UR (mmHg)	P value	26 mm S3U (mmHg)	26 mm S3UR (mmHg)	P value	S3U PVL (%)	S3UR PVL (%)	P value
1 Day	Peak Mean	22.71 12.18	16.73 9.47	**0.01** **0.04**	18.73 9.78	16.59 8.18	**0.12** **0.06**	14.67	0	**0.03**
30 Day	Peak Mean	26.88 14.65	18.80 10.27	**< 0.01** **< 0.01**	22.24 12.00	18.23 9.81	**0.01** **0.02**	26.67	0	**<0.01**
1 Year	Peak Mean	28.37 15.18	21.33 11.6	**0.02** **0.03**	20.96 11.66	18.76 9.76	**0.13** **0.09**	26.67	0	**<0.01**
2 Year	Peak Mean	28.31 15.16	21.49 11.2	**0.03** **0.02**	19.60 10.13	17.71 9.50	**0.16** **0.27**	28.00	7.69	**0.02**

Table 1. Gradients ($\bar{x}$) are lower with S3UR in 23-mm valves and comparable between 23-mm S3UR and 26-mm S3U ($p<0.05$), while there was no difference between 23-mm S3UR and 26-mm S3U valves. PVL was significantly less in the S3UR group by two sample T test.

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83204 | Predictors of Conduction System Disturbances Resulting in a New Permanent Pacemaker Implantation: A Sub-study of the LANDMARK Trial

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Background: This sub-analysis of the LANDMARK trial compares the incidence of new permanent pacemaker implantation (PPI) after transcatheter aortic valve implantation (TAVI) between Myval and Contemporary (Sapien and Evolut) transcatheter heart valve (THV) series and THV types at 30-day and 1-year in patients with severe symptomatic native aortic stenosis. It also identifies pre- and peri-procedural predictors of PPI using multivariable regression models at 1-year.
Methods: The LANDMARK trial, a prospective, multinational randomized trial, was conducted across 31 sites in 16 countries. Patients were randomized 1:1 to Myval or contemporary (balloon-expandable [BE] Sapien THV series and self-expanding [SE] Evolut THV series) THV series. The as-treated population included 706 patients: Myval THV series (n=352) and Contemporary THV series (n=354) (Sapien [n=181] and Evolut [n=173]). BE (Myval and Sapien) THV series and SE (Evolut) THV groups included 533 and 173 patients, respectively. Electrograms were analysed and PPI events were adjudicated independently by clinical events committee. Predictors of PPI were evaluated using a combined multivariable regression model at 1-year.
Results: At 30 days and 1-year, PPI rates with Myval THV series (15.6% and 17.6%) were comparable to Sapien THV series (18.2% and 19.3%), Evolut THV series (18.5% and 19.1%), and Contemporary THV series (18.4% and 19.2%). Similarly, BE-THV vs SE THV groups showed comparable PPI rates at 30 days (16.5% vs 18.5%) and 1-year (18.2% vs 19.1%). Baseline right bundle branch block (RBBB), with or without fascicular block, was the most frequent indication of PPI. The combined multivariable regression model identified several significant predictors of PPI across all THV groups at 1-year: RBBB, left anterior fascicular block, atrial fibrillation, AV conduction delay > 200 m.sec, membranous septum length, implantation depth-non coronary cusp, and implantation depth-left coronary cusp.
Conclusion: Myval THV series demonstrated PPI rates comparable to contemporary THV series at 30 days and 1-year. Baseline conduction abnormalities, anatomical and peri-procedural factors were significant PPI predictors at 1-year.

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83207 | Win Ratio Analysis for the 1-Year Composite Endpoint: A Sub-study of the LANDMARK Trial

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Background: Traditional time-to-first event (Kaplan-Meier) analyses for composite endpoints consider only the first event and do not account for event severity and recurrence, whereas win-ratio analyses account for both severity and recurrence.
Methods: We performed a post-hoc win-ratio analysis of the 1-year composite endpoint in the LANDMARK trial, a prospective, multicentre, non-inferiority trial that randomized patients with severe native aortic stenosis to receive either the Myval transcatheter heart valve (THV) series (n=384) or contemporary (Sapien and Evolut series, n=192 in