Multicenter comparison of latest generation self-expanding versus balloon-expandable transcatheter aortic valve replacement (TAVR) using the latest generation self-expanding ACURATE neo2 (Neo2) and the balloon-expandable SAPIEN 3 Ultra (Ultra) transcatheter heart valves (THV).

**Objectives:** To compare outcomes after transcatheter aortic valve replacement (TAVR) using the latest generation self-expanding ACURATE neo2 (Neo2) and the balloon-expandable SAPIEN 3 Ultra (Ultra) transcatheter heart valves (THV).

**Methods:** 722 patients at 4 centers were included and treated either with Neo2 (n=230) or Ultra (n=492) THV. Using 1:1 propensity score matching (PSM), 178 matched pairs were identified. Results: While rates of moderate to severe paravalvular leakage (PVL II+) were overall low and similar (1.1% vs. 1.1%; p=0.999), elevated transprosthetic gradients (≥20 mmHg) were less frequent with Neo2 (0.6% vs. 7.3%; p<0.001), which translated into a significantly higher rate of device success with Neo2 compared with Ultra (94.9% vs. 84.3%; p=0.002). Overall stroke rates, major vascular complications, life-threatening bleedings and need for permanent pacemaker implantation as well as 30-day mortality were comparable between the two groups.

**Conclusions:** In this multicenter registry, short-term outcomes after TAVR using the Neo2 or Ultra THV were excellent and overall comparable. However, transprosthetic gradients were lower with the Neo2 platform, which translated into a lower rate of device failure.

**Disclosures**

AVK: proctor fees from Edwards Lifesciences and Boston Scientific. MJ: lecture fees and research grants from Edwards Lifesciences and Boston Scientific, consultant for Biotronik and Orbus Neich. WKK: proctor fees from Edwards Lifesciences and Boston Scientific. MJ: 84.3%; p<0.002). Overall stroke rates, major vascular complications, life-threatening bleedings and need for permanent pacemaker implantation as well as 30-day mortality were comparable between the two groups.

**Conclusions:** In this multicenter registry, short-term outcomes after TAVR using the Neo2 or Ultra THV were excellent and overall comparable. However, transprosthetic gradients were lower with the Neo2 platform, which translated into a lower rate of device failure.

**Objectives:** To compare outcomes after transcatheter aortic valve replacement (TAVR) using the latest generation self-expanding ACURATE neo2 (Neo2) and the balloon-expandable SAPIEN 3 Ultra (Ultra) transcatheter heart valves (THV).

**Methods:** 722 patients at 4 centers were included and treated either with Neo2 (n=230) or Ultra (n=492) THV. Using 1:1 propensity score matching (PSM), 178 matched pairs were identified. Results: While rates of moderate to severe paravalvular leakage (PVL II+) were overall low and similar (1.1% vs. 1.1%; p=0.999), elevated transprosthetic gradients (≥20 mmHg) were less frequent with Neo2 (0.6% vs. 7.3%; p<0.001), which translated into a significantly higher rate of device success with Neo2 compared with Ultra (94.9% vs. 84.3%; p=0.002). Overall stroke rates, major vascular complications, life-threatening bleedings and need for permanent pacemaker implantation as well as 30-day mortality were comparable between the two groups.

**Conclusions:** In this multicenter registry, short-term outcomes after TAVR using the Neo2 or Ultra THV were excellent and overall comparable. However, transprosthetic gradients were lower with the Neo2 platform, which translated into a lower rate of device failure.

**Disclosures**

AVK: proctor fees from Edwards Lifesciences and Boston Scientific. MJ: lecture fees and research grants from Edwards Lifesciences and Boston Scientific, consultant for Biotronik and Orbus Neich. WKK: proctor fees from Edwards Lifesciences and Boston Scientific. MJ: 84.3%; p<0.002). Overall stroke rates, major vascular complications, life-threatening bleedings and need for permanent pacemaker implantation as well as 30-day mortality were comparable between the two groups.

**Conclusions:** In this multicenter registry, short-term outcomes after TAVR using the Neo2 or Ultra THV were excellent and overall comparable. However, transprosthetic gradients were lower with the Neo2 platform, which translated into a lower rate of device failure.

**Disclosures**

AVK: proctor fees from Edwards Lifesciences and Boston Scientific. MJ: lecture fees and research grants from Edwards Lifesciences and Boston Scientific, consultant for Biotronik and Orbus Neich. WKK: proctor fees from Edwards Lifesciences and Boston Scientific. MJ: 84.3%; p<0.002). Overall stroke rates, major vascular complications, life-threatening bleedings and need for permanent pacemaker implantation as well as 30-day mortality were comparable between the two groups.

**Conclusions:** In this multicenter registry, short-term outcomes after TAVR using the Neo2 or Ultra THV were excellent and overall comparable. However, transprosthetic gradients were lower with the Neo2 platform, which translated into a lower rate of device failure.

**Disclosures**

AVK: proctor fees from Edwards Lifesciences and Boston Scientific. MJ: lecture fees and research grants from Edwards Lifesciences and Boston Scientific, consultant for Biotronik and Orbus Neich. WKK: proctor fees from Edwards Lifesciences and Boston Scientific. MJ: 84.3%; p<0.002). Overall stroke rates, major vascular complications, life-threatening bleedings and need for permanent pacemaker implantation as well as 30-day mortality were comparable between the two groups.

**Conclusions:** In this multicenter registry, short-term outcomes after TAVR using the Neo2 or Ultra THV were excellent and overall comparable. However, transprosthetic gradients were lower with the Neo2 platform, which translated into a lower rate of device failure.

**Disclosures**

AVK: proctor fees from Edwards Lifesciences and Boston Scientific. MJ: lecture fees and research grants from Edwards Lifesciences and Boston Scientific, consultant for Biotronik and Orbus Neich. WKK: proctor fees from Edwards Lifesciences and Boston Scientific. MJ: 84.3%; p<0.002). Overall stroke rates, major vascular complications, life-threatening bleedings and need for permanent pacemaker implantation as well as 30-day mortality were comparable between the two groups.

**Conclusions:** In this multicenter registry, short-term outcomes after TAVR using the Neo2 or Ultra THV were excellent and overall comparable. However, transprosthetic gradients were lower with the Neo2 platform, which translated into a lower rate of device failure.

**Disclosures**

AVK: proctor fees from Edwards Lifesciences and Boston Scientific. MJ: lecture fees and research grants from Edwards Lifesciences and Boston Scientific, consultant for Biotronik and Orbus Neich. WKK: proctor fees from Edwards Lifesciences and Boston Scientific. MJ: 84.3%; p<0.002). Overall stroke rates, major vascular complications, life-threatening bleedings and need for permanent pacemaker implantation as well as 30-day mortality were comparable between the two groups.

**Conclusions:** In this multicenter registry, short-term outcomes after TAVR using the Neo2 or Ultra THV were excellent and overall comparable. However, transprosthetic gradients were lower with the Neo2 platform, which translated into a lower rate of device failure.

**Disclosures**

AVK: proctor fees from Edwards Lifesciences and Boston Scientific. MJ: lecture fees and research grants from Edwards Lifesciences and Boston Scientific, consultant for Biotronik and Orbus Neich. WKK: proctor fees from Edwards Lifesciences and Boston Scientific. MJ: 84.3%; p<0.002). Overall stroke rates, major vascular complications, life-threatening bleedings and need for permanent pacemaker implantation as well as 30-day mortality were comparable between the two groups.

**Conclusions:** In this multicenter registry, short-term outcomes after TAVR using the Neo2 or Ultra THV were excellent and overall comparable. However, transprosthetic gradients were lower with the Neo2 platform, which translated into a lower rate of device failure.

**Disclosures**

AVK: proctor fees from Edwards Lifesciences and Boston Scientific. MJ: lecture fees and research grants from Edwards Lifesciences and Boston Scientific, consultant for Biotronik and Orbus Neich. WKK: proctor fees from Edwards Lifesciences and Boston Scientific. MJ: 84.3%; p<0.002). Overall stroke rates, major vascular complications, life-threatening bleedings and need for permanent pacemaker implantation as well as 30-day mortality were comparable between the two groups.

**Conclusions:** In this multicenter registry, short-term outcomes after TAVR using the Neo2 or Ultra THV were excellent and overall comparable. However, transprosthetic gradients were lower with the Neo2 platform, which translated into a lower rate of device failure.

**Disclosures**

AVK: proctor fees from Edwards Lifesciences and Boston Scientific. MJ: lecture fees and research grants from Edwards Lifesciences and Boston Scientific, consultant for Biotronik and Orbus Neich. WKK: proctor fees from Edwards Lifesciences and Boston Scientific. MJ: 84.3%; p<0.002). Overall stroke rates, major vascular complications, life-threatening bleedings and need for permanent pacemaker implantation as well as 30-day mortality were comparable between the two groups.

**Conclusions:** In this multicenter registry, short-term outcomes after TAVR using the Neo2 or Ultra THV were excellent and overall comparable. However, transprosthetic gradients were lower with the Neo2 platform, which translated into a lower rate of device failure.

**Disclosures**

AVK: proctor fees from Edwards Lifesciences and Boston Scientific. MJ: lecture fees and research grants from Edwards Lifesciences and Boston Scientific, consultant for Biotronik and Orbus Neich. WKK: proctor fees from Edwards Lifesciences and Boston Scientific. MJ: 84.3%; p<0.002). Overall stroke rates, major vascular complications, life-threatening bleedings and need for permanent pacemaker implantation as well as 30-day mortality were comparable between the two groups.

**Conclusions:** In this multicenter registry, short-term outcomes after TAVR using the Neo2 or Ultra THV were excellent and overall comparable. However, transprosthetic gradients were lower with the Neo2 platform, which translated into a lower rate of device failure.

**Disclosures**

AVK: proctor fees from Edwards Lifesciences and Boston Scientific. MJ: lecture fees and research grants from Edwards Lifesciences and Boston Scientific, consultant for Biotronik and Orbus Neich. WKK: proctor fees from Edwards Lifesciences and Boston Scientific. MJ: 84.3%; p<0.002). Overall stroke rates, major vascular complications, life-threatening bleedings and need for permanent pacemaker implantation as well as 30-day mortality were comparable between the two groups.

**Conclusions:** In this multicenter registry, short-term outcomes after TAVR using the Neo2 or Ultra THV were excellent and overall comparable. However, transprosthetic gradients were lower with the Neo2 platform, which translated into a lower rate of device failure.