Appendix Table 1: Characteristics of the studies

| **Ref** | **Author** | **Title** | **Year** | **Country** | **Patients** | **Intervention** | **Comparator** | **Outcome** | **Cost/QALY** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 20 | Kaier K et al. | Estimating the additional costs per life saved due to transcatheter aortic valve replacement: a secondary data analysis of electronic health records  in Germany. | 2019 | Germany | Patients with aortic stenosis. | TF-TAVR (TAVR with transfemoral access) | SAVR | A) In-hospital mortality B) Reimbursement | NA |
| 21 | Baron SJ et al. | Cost-Effectiveness of Transcatheter Versus Surgical Aortic Valve Replacement in Patients With Severe Aortic Stenosis  at Intermediate Risk. | 2019 | US | Intermediate-risk patients | XT-TAVR (sapien xt valve) Comparison 1  S3-TAVR (sapien 3 valve) Comparison 2 | SAVR | ICER | DOMINANT |
| 22 | Goodall G et al. | Cost-effectiveness analysis of the SAPIEN 3 TAVI valve compared with surgery in intermediate-risk patients. | 2019 | France | Intermediate risk patients defined with STS risk score of ≥4% and <8% | TAVI | SAVR | ICER | DOMINANT |
| 23 | Tam DY et al. | Cost-Effectiveness of Self-Expandable Transcatheter Aortic Valves in Intermediate-Risk Patients. | 2018 | Canada | Intermediate-risk patients | TAVI | SAVR | ICER | $ 76,736 |
| 24 | Simons CT et al. | Transcatheter aortic valve replacement in nonsurgical candidates with severe, symptomatic aortic stenosis: a cost-effectiveness analysis. | 2013 | US | Inoperable patients with symptomatic and severe aortic stenosis | TAVI | MM | ICER | $ 116,500 |
| 25 | Fairbairn TA et al. | The cost-effectiveness of transcatheter aortic valve implantation versus surgical aortic valve replacement in patients with severe aortic stenosis at high operative risk. | 2013 | UK | High-risk patients | TAVI | SAVR | ICER | DOMINANT |
| 26 | Hancock-Howard RL et al. | Cost effectiveness of transcatheter aortic valve replacement compared to medical  management in inoperable patients with severe aortic stenosis: Canadian analysis  based on the PARTNER Trial Cohort B findings. | 2013 | Canada | Patients who were not eligible for surgery traditional | TAVI via accesso transfemorale | MM | ICER | $ 32,170 |
| 27 | Gada H et al. | Markov model for selection of aortic valve replacement versus transcatheter aortic valve implantation (without replacement) in high-risk patients. | 2012 | US | High-risk patients, but operable | TAVI | SAVR | ICER | $ 52,733 |
| 28 | Reynolds MR et al. | Cost-effectiveness of transcatheter aortic valve replacement compared with standard care among inoperable patients with severe aortic stenosis: results from the placement of aortic transcatheter valves (PARTNER) trial (Cohort B). | 2012 | US | Patients with inoperable aortic stenosis | TAVR | MM | ICER | $ 61,889 |
| 29 | Watt M et al. | Cost-effectiveness of transcatheter aortic valve replacement in patients ineligible for conventional aortic valve replacement. | 2012 | UK | Patients with inoperable aortic stenosis | TAVR | MM | ICER | £ 16,200 |
| 30 | Kodera S. et al. | Cost effectiveness of transcatheter aortic valve implantation in patients with aortic stenosis in Japan. | 2018 | Japan | Patients with inoperable aortic stenosis in the first comparison. Intermediate-risk aortic stenosis patients in the second comparison. | TAVI with SAPIEN valve 3 | MM and SAVR | ICER | MM 3,918,808 Yen  SAVR  7,523 ,821 Yen |
| 31 | Doble B. et al. | Cost-effectiveness of the Edwards SAPIEN transcatheter heart valve compared with standard management and surgical aortic valve replacement in patients with severe symptomatic aortic stenosis: a Canadian perspective. | 2012 | Canada | Patients with inoperable aortic stenosis in the first comparison. Intermediate-risk aortic stenosis patients in the second comparison. | TAVI | MM and SAVR | ICER | MM  $ 51,324  SAVR  $ 870,143 |
| 32 | Reynolds MR. et al. | Cost-Effectiveness of Transcatheter Aortic Valve Replacement With a Self-Expanding Prosthesis Versus Surgical Aortic Valve Replacement. | 2016 | US | Patients with high-risk aortic stenosis. 795 patients: 663 TAVI - 132 SAVR | TAVR with a self-expanding prosthesis | SAVR | ICER | $ 55,045 |
| 33 | Reynolds MR. et al. | Cost-effectiveness of transcatheter aortic valve replacement compared with surgical aortic valve replacement in high-risk patients with severe aortic stenosis: results of the PARTNER (Placement of Aortic Transcatheter Valves) trial (Cohort A). | 2012 | US | Patients with high operational risk, but not prohibitive. 699 Patients of which 348 assigned to TAVR and 351 assigned to AVR | TF-TAVR  TA-TAVR | SAVR | ICER | Dominant TAVR Dominated TAVR |
| 34 | Murphy A. et al. | Transcatheter aortic valve implantation for severe aortic stenosis: the cost-effectiveness case for inoperable patients in the United Kingdom. | 2013 | UK | Inoperable patients with aortic stenosis | TAVI | MM | ICER | £ 35,956 |
| 35 | Neyt m. et al. | A cost-utility analysis of transcatheter aortic valve implantation in Belgium: focusing on a well-defined and identifiable population. | 2012 | Belgium | Inoperable patients with aortic stenosis | TAVI | MM | ICER | € 44, 932 |
| 36 | Orlando R. et al. | Cost-effectiveness of transcatheter aortic valve implantation (TAVI) for aortic stenosis in patients who are high risk or contraindicated for surgery: a model-based economic evaluation. | 2013 | UK | Inoperable patients with aortic stenosis | TAVI | MM | ICER | £12,900 |
| 37 | Ribera A. et al. | Transfemoral transcatheter aortic valve replacement compared with surgical replacement in patients with severe aortic stenosis and comparable risk: cost- utility and its determinants. | 2015 | Spain | Patients with aortic stenosis | TAVI | SAVR | ICER | Dominated |
| 38 | Armeni P. et al | Real-world cost effectiveness of MitraClip combined with Medical Therapy Versus Medical therapy alone in patients with moderate or severe mitral regurgitation. | 2016 | Italy | Inoperable patients with aortic stenosis | TAVI | MM | ICER | € 7,908 |
| 39 | Asgar AW et al. | Clinical outcomes and economic impact of transcatheter mitral leaflet repair in heart failure patients. | 2016 | Canada | Inoperable patients with aortic stenosis | MC-TAVI | MM | ICER | € 32,300 |
| 40 | Borisenko O. et Al. | Cost-utility analysis of percutaneous mitral valve repair in inoperable patients with functional mitral regurgitation in German settings. | 2015 | Germany | Inoperable patients with aortic stenosis | MV-TAVI | MM | ICER | € 15,533 |
| 41 | Cameron H. et Al. | A Canadian cost-effectiveness analysis of transcatheter mitral valve repair with the MitraClip System in high surgical risk patients with significant mitral regurgitation. | 2014 | Canada | Inoperable patients with aortic stenosis | MVR-TAVI | MM | ICER | € 23,433 |
| 42 | Guerin P. et al. | MitraClip therapy in mitral regurgitation: a Markov model for the cost-effectiveness of a new therapeutic option. | 2016 | France | Inoperable patients with aortic stenosis | MC-TAVI | MM | ICER | NA |
| 43 | Mealing S. et al. | High Risk Study based UK cost-effectiveness analysis of MitraClip in patients with severe Mitral Regurgitation ineligible for conventional repair/replacement surgery. | 2013 | UK | Inoperable patients with aortic stenosis | MC-TAVI | MM | ICER | £22 200 |
| 44 | Brecker S. et al. | Cost-utility of transcatheter aortic valve implantation for inoperable patients with severe aortic stenosis treated by medical management: a UK cost-utility analysis based on patient-level data from the ADVANCE study. | 2014 | UK | Inoperable patients with aortic stenosis | TAVI | MM | ICER | £17 718 |
| 45 | Freeman PM. et al. | Severe symptomatic aortic stenosis: medical therapy and transcatheter aortic valve implantation (TAVI)-a real-world retrospective cohort analysis of outcomes and cost-effectiveness using national data. | 2016 | UK | Inoperable patients with aortic stenosis | TAVI | MM | ICER | £10 533 |
| 46 | Scottish Health Technologies Group | Trans-catheter aortic valve implantation in Scottland | 2010 | Scotland | Patients with aortic stenosis | TAVI | SAVR | ICER | £87 293 |
| 47 | Belgian Health Care Knowledge Centre. | Transcatheter Aortic Valve Implantation (TAVI): A Health Technology Assessment Update. | 2011 | Belgium | Inoperable and high-risk patients with aortic stenosis | TAVI | SAVR and MM | ICER | SAVR  € 912,206  MM  € 37,432 |
| 48 | Orlando, R, Pennant, M, Rooney, S, et al. | Cost-effectivness of trancatheter aortic valve impantation (TAVI) for aortic stenosis in patients who are high risk or contraindicated for surgery: A model-based economic evaluation. | 2013 | UK | Inoperable and high-risk patients with aortic stenosis | TAVI | SAVR and MM | ICER | SAVR: DOMINATED  MM:  £12,900 |
| 49 | Sehatzadeh S, Doble B, Xie F, Blackhouse G, Campbell K, Kaulback K, Chandra K, Goeree R. | Transcatheter aortic valve implantation (TAVI) for treatment of aortic valve stenosis: an evidence-based Analysis (part B). | 2012 | Canada | high-risk patients with aortic stenosis | TAVI | SAVR | ICER | $48,912 |
| 50 | Health Information and Quality Authority | Health Technology Assessment of transcatheter aortic valve implantation (TAVI) in patients with severe symptomatic aortic stenosis at low and intermediate risk of surgical complications | 2019 | Ireland | patients aged 70 years and older at low and intermediate risk of surgical complications | TAVI | SAVR | ICER | DOMINANT |