**Table 2:** Baseline Characteristics

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|  | **Ahmad et al. (2019) A** | **Ahmad et al. (2019) B** | **Akin et al. (2012)** | **Bagur et al. (2012)** | **Bhardwaj et al. (2018)** | **Bleiziffer et al. (2010)** | **Buellesfeld et al. (2012)** | **Buja et al. (2013)** | **Cha et al. (2021)** |
| **Age in years** | 80.5 | 79.5 | PPM: 80.7 no PPM: 81.55 | TAVI: 811 SAVR: 80 | 83 | 80.8 | PPM: 82.53  No PPM: 82.63 | 81 | 77.8 |
| **Female %** | 48.4% | 49.4% | 60% | 60% | 49.1% | 57.2% | 57.5% | 55.8% | 50% |
| **BMI, kg/m2** | <25: 24.9%  25-29: 34.8%  30-34: 21.2%  ≥35: 19.1% | <25: 24.9%  25-29: 32.3%  30-34: 22.3%  ≥35: 20.5% | PPM: 26.9 no PPM: 26.8 | TAVI: 26 SAVR: 27 | 33.9 | - | - | - | 23.6 |
| **Diabetes** | 41.1% | 44.6% | 37.8% | 24.6% | 36.3% | - | 26.1% | 26% | 32.5% |
| **Dyslipidemia** | - | - | - | - | - | - |  | 56% | - |
| **Hypertension** | 92.4% | 91.4% | 91.1% | 73.1% | 93.7% | - | 75.9% | 75% | 71.4% |
| **Coronary artery disease** | - | - | - | - | - | - | 57.5% | 54% | - |
| **Previous PCI** | - | - | - | 24.2% | 20.1% | - | 19.5% | 29% | 33.0% |
| **Previous CABG** | - | - | 6.7% | 20.1% | 32.6% | - | 23.2% | 16% | 2.4% |
| **Heart failure** | 27.5% | 14.5% | - | - | 27.4% | - | - | 32% |  |
| **NYHA I-II** | 14.9% | 11.1% | 4.4% | 28% | - | - | - | - | - |
| **NYHA III-IV** | 85.1% | 88.8% | 95.6% | 72% | - | - | 74.5% | 72% | - |
| **LVEF>40** | - | - | PPM: 46.1%  No PPM: 50.2% | TAVI: 54% SAVR: 59% | - | - | no PPM: 52.21 % PPM before TAVI: 48.50% PPM after TAVI: 49.27% | 51% | 57.2%% |
| **LVEF <40** | - | - | - | - | - | - | - | 21% |  |
| **Prior stroke** | - | - | 28.9% | 17% | 9.9% | - | 7.6% | 7.3% | 12.1% |
| **Peripheral arterial disease** | - | - | 13.3% | 20.1% | 40.7% | - | 19.8% | 19% | 6.3% |
| **COPD** | Mild: 21.7%  Moderate: 14.9%  Severe: 7.8% | Mild: 19.7%  Moderate: 15.2%  Severe: 7.8% | 17.8% | 22.4% |  | - | - | 21% | 6.3% |
| **eGFR <60** | - | - | - | - | - | - | - | 23% | - |
| **ESRD on dialysis** | 3.7% (14/382) | - | - | - | - | - | - | - | - |
| **STS-PROM score (%)** | 6.9 | 6.2 |  | TAVI: 9.2 SAVR: 3.6 | 9 | - | - | - | 7.2 |
| **Pulmonary hypertension** | - | - | - | - | - | - | - | - | - |
| **mean aortic gradient (mmHg)** | - | - |  | TAVI: 44 SAVR: 47 | 41 | - | no PPM: 45.03 PPM before TAVI: 40.92 PPM after TAVI: 45.32 | 52 | - |
| **aortic valve area (cm2)** | - | - | PPM: 0.8 No PPM: 0.7 | TAVI: 44 SAVR: 47 | 0.6 | 0.65 | No PPM: 0.62 PPM before TAVI: 0.64 PPM after TAVI: 0.62 |  | 0.71 |

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|  | **Chamandi et al. (2018)** | **Costa et al. (2019)** | **Cresse et al. (2019)** | **D’Ancona et al. (2011)** | **De Carlo et al. (2012)** | **De Torres-Alba et al. (2018)** | **Denegri et al. (2021)** | **Dizon et al. (2015)** | **Dolci et al. (2019)** |
| **Age in years** | PPM: 82 no PPM: 81 | 82 | 83 | PPM: 82.4 no PPM: 79.1 | 82.4 | 81.6 | Females: 83 Males: 81 | Prior PPM: 85.1 New PPM: 84.8 No PPM: 84.2 LBBB/No PPM: 84.5 | 80 |
| **Female %** | 43% | 58.1% | 46.6% | 66.8% | 53.4% | 55.6% | 56.2% | 47.70% | 47.7% |
| **BMI, kg/m2** | - | - | - | PPM: 25.7 no PPM: 27.2 | - | - | Females: 26 Males: 26 | - | 26 |
| **Diabetes** | 33.7%% | 28.9% | 38.1% | 24.8% | - | - | 29.7% | 36.7% | 28% |
| **Dyslipidemia** | - | - | - | - | - | - |  | 83.7% | 56% |
| **Hypertension** | - | 86.2% | 90.2% | - | - | - | 82.6% | 91.7% | 70% |
| **Coronary artery disease** | 41.5% |  | 79.3% | 59.6% | - | - | 37.9% | 77.7% | - |
| **Previous PCI** | - | 20.3% | - | - | - | - | 25.8% | 39.9% | 52% |
| **Previous CABG** | 13.7% | 8.2% | - | 15.5% | - | - | 59.5% | 42.7% | 52% |
| **Heart failure** | - | - | - | - | - | - |  |  |  |
| **NYHA I-II** | 26.9% |  | 29.5% | - | - | - |  | - | - |
| **NYHA III-IV** | 70.6% | 74% | 70.5% | 91.6% | - | - | 71.8%) | NYHA III: 48.2%  NYHA IV: 46.5% | 62% |
| **LVEF>40** | PPM: 57% no PPM: 56 % | 53.3% | - | PPM:50.5% no PPM: 50.5% | 51.8% | 53.5% | Females: 54.3% Males: 49.7% | Prior PPM: 47.3% New PPM: 53.5% No PPM: 53.8% LBBB/No PPM: 45.3% | 53% |
| **LVEF <40** | - | - | - | - | - | - |  | **LVEF < 35** Prior PPM: 27.0% New PPM: 27.0% No PPM: 27.9% LBBB/No PPM: 25.9% | - |
| **Prior stroke** | 12.8% | 5% | - | 23.6% | - | - | 4.5% | 26.2% | - |
| **Peripheral arterial disease** | - | - |  | 72.4% | - | - |  | 42.8% | 22% |
| **COPD** | 26.4% | - | 28% | 47.5% | - | - | 18.2% | 44.6% | 15% |
| **eGFR <60** | 59.2% | - | - | - | - | - | - | - | - |
| **ESRD on dialysis** | - | - | - | - | - | - | - | - | - |
| **STS-PROM score (%)** | PPM: 7.4 no PPM: 6.9 | 4.4 | - | PPM:134 no PPM: 18.8 | - | - | Females: 7.8 Males: 7.2 | Prior PPM: 11.9 New PPM: 11.5 No PPM: 11.3 LBBB/No PPM: 11.7 | - |
| **Pulmonary hypertension** | - | - | - | - | - | - | - | 38.8% | - |
| **mean aortic gradient (mmHg)** | PPM: 47.2 no PPM: 48.3 | 50.5 | - | - | 53.2 | - | Females: 52.4 Males: 47.3 | - | - |
| **aortic valve area (cm2)** | PPM: 0.6 no PPM: 0.7 | 0.6 | - | PPM:0.6 non-PPM: 0.6 | 0.32 | - | - | - | 0.7 |

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|  | **Doshi et al. (2017)** | **Doshi et al. (2018)** | **Du et al. (2020)** | **Elchinova et al. (2021)** | **Ferreira et al. (2021)** | **Gaede et al. (2017)** | **Gensas et al. (2014)** |
| **Age in years** | Males: 80.5 Females: 81.7 | Pacing on admission: 85.1 New pacing: 81.7 No pacing: 80.8 | PPM: 76.6 No PPM: 76.5 | No PPM: 81.8 PPM late after TAVI: 80.6 | PPM: 82.19 No PPM: 81.98 | No PPM: 82.0 New PPM: 81.72 | PPM: 82.96 No PPM: 81.03 |
| **Female %** | 47.7% | Pacing on admission: 43.5%  New pacing: 49.6%  No pacing: 47.1% | 42.2% | 52.8% | PPM: 28.5%  No PPM: 58.5% | 42.7% | 53.5% |
| **BMI, kg/m2** | - | - | 22.7 | 26.4 | PPM: 26.49 No PPM: 25.96 | - | PPM: 26.41 No PPM: 25.85 |
| **Diabetes** | Males: 35.9%  Females: 33.0% | Pacing on admission: 35.5%  New pacing: 28.8%  No pacing: 28.4% | 21.8% | 24.9% | 32.4% | 33.3% | 32.0% |
| **Dyslipidemia** | - | - | 25.6% | - | 50.0% | - | 51.3% |
| **Hypertension** | Males: 78.7%  Females: 80.2% | Pacing on admission:  New pacing: 79.4%  No pacing: 79.4% | 55.5% | 85.5% | 78.3% | - | 72.8% |
| **Coronary artery disease** | - | - | - | 62.4% | - | 60.9% | - |
| **Previous PCI** | - | Pacing on admission: 3.2%  New pacing: 3.8%  No pacing: 3.3% | PPM: 21.1%  No PPM: 8.7% | 25.8% | PPM: 47.6%  No PPM: 35.8% | 35.9% | 34.6% |
| **Previous CABG** | - | Pacing on admission: 0%  New pacing: 0.3%  No pacing: 0.7% | - | - | 12.2% | 19.7% | 17.0% |
| **Heart failure** |  |  |  |  |  |  |  |
| **NYHA I-II** | - | - | NYHA II: 12.5% | - | - | - | 17.6% |
| **NYHA III-IV** | - | - | NYHA III: 42.0%  NYHA IV: 45.5% | - | - | 92.9% | 82.4% |
| **LVEF>40** | - | - | PPM: 55.6% No PPM: 52.6% | No PPM: 55% PPM late after TAVI: 52% | PPM: 53.52% No PPM: 59.96% | - | PPM: 59.52% No PPM: 57.58% |
| **LVEF <40** | - | - | - | - | - | - | - |
| **Prior stroke** | - | - | 4.3% | - | - | - | - |
| **Peripheral arterial disease** | Males: 31.4%  Females: 27.8% | - | 22.4% | - | - | 21.1% | 15.2% |
| **COPD** | Males: 34.3% (1474/4296) Females: 32.0% (1252/3914) | Pacing on admission: 17.7%  New pacing: 34.1%  No pacing: 33% | 23.0% | - | - | 21.2% | 18.4% |
| **eGFR <60** | - | Pacing on admission: 38.7%  New pacing: 38.9%  No pacing: 37.0% | mean eGFR of 56.4 mL/min | - | 42% | - | 77.3% |
| **ESRD on dialysis** | - | Pacing on admission: 6.4%  New pacing: 5.3%  No pacing: 4.4% | - | - | - | - | - |
| **STS-PROM score (%)** | - | - | PPM: 6.5 No PPM: 7.2 | No PPM: 5.4 PPM late after TAVI: 4.9 | PPM: 5.16 No PPM: 4.49 | - | PPM: 14.48 No PPM: 14.37 |
| **Pulmonary hypertension** | - | - | - | - | - | - | PPM: 20.2%  No PPM: 21.9% |
| **mean aortic gradient (mmHg)** | - | - | PPM: 54.4 No PPM: 56.6 | No PPM: 41 PPM late after TAVI: 38 | PPM: 43.94 No PPM: 49.95 | - | PPM: 52.86 No PPM: 51.30 |
| **aortic valve area (cm2)** | - | - | PPM: 0.62 No PPM: 0.57 | No PPM: 0.7 PPM late after TAVI: 0.7 | PPM: 0.41 No PPM: 0.43 | - | PPM: 0.64 No PPM: 0.64 |

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|  | **Giustino et al. (2016)** | **Gonska et al. (2016)** | **Gonska et al. (2018)** | **Guetta et al. (2011)** | **Hamdan et al. (2015)** | **Hayashida et al. (2012)** | **Humphries et al. (2012)** | **Husser et al. (2019)** |
| **Age in years** | No PPM: 80.8 Old PPM: 80.9 New PPM: 82.2 | No PPM: 79.8 PPMI: 80.5 | No PPM: 80.1 PPM: 81.1 | No AV block: 84 AV block: 82 | No PPM: 79.8 PPM: 80.1 | 83.1 | Females: 83 Males: 82 | Sapien 3: 82 Acurate neo: 81 |
| **Female %** | 47.4% | No PPM: 54.1%  PPMI: 44.2% | No PPM: 55.0%  PPM: 47.6% | No AV block: 67%  AV block: 56% | No PPM: 50%  PPM: 77% | 50.3% | 51% | Sapien 3: 72.2% Acurate neo: 60.2% |
| **BMI, kg/m2** | No PPM: 25.6 Old PPM: 25.6 New PPM: 26.6 | No PPM: 27.25 PPM: 28.46 | No PPM: 26.9 PPM: 27.2 | - | - | 25.7 | - | Sapien 3: 26.4 Acurate neo: 27.9 |
| **Diabetes** | 28.8% | No PPM: 32.5%  PPM: 26.9% | No PPM: 31.5%  PPM: 25.6% | 34% | No PPM: 38%  PPM: 38% | 23.5% | 30.7% | Sapien 3: 32.8%  Acurate neo: 32.7% |
| **Dyslipidemia** | - | - | - | 81% | No PPM: 71%  PPM: 67% | 48.5% | - | - |
| **Hypertension** | 71.0% | - | - | 83% | No PPM: 85%  PPM: 81% | 70.8% | 78.9% | Sapien 3: 86.4%  Acurate neo: 92.9% |
| **Coronary artery disease** | - | No PPM: 57.6% PPM: 67.3% | No PPM: 60.8%  PPM: 63.5% | 54% | No PPM: 44%  PPM: 62% | 63.8% | 72.9% | Sapien 3: 68.2%  Acurate neo: 66.3% |
| **Previous PCI** | 30.0% | - | - | - | No PPM: 19%  PPM: 29% | 30.4% | Prior revascularization: 51.2% | Sapien 3: 42.4%  Acurate neo: 42.9% |
| **Previous CABG** | 21.7% | - | - | No AV block: 20%  With AV block: 28% | No PPM: 19%  PPM: 24% | - | Prior revascularization: 51.2% | Sapien 3: 9.6%  Acurate neo: 10.2% |
| **Heart failure** |  |  |  |  |  |  |  |  |
| **NYHA I-II** | - | - | - | - | - | - | - |  |
| **NYHA III-IV** | 80.6% | No PPM: 83.1%  PPM: 78.9% | No PPM: 81.1%  PPM: 75.6% | NYHA III: 72%  NYHA IV: 28% | - | 84.6% | 86.4% | Sapien 3: 78.3%  Acurate neo: 79.6% |
| **LVEF>40** | no PPM: 52.2 Old PPM: 45.3 New PPM: 52.3 | - | No PPM: 57.1 PPM: 58.0 | - | - | 50.4 | Females: 60 Males: 55 | Sapien 3: 60% Acurate neo: 60% |
| **LVEF <40** | No PPM: 19.4%  Old PPM: 35.1%  New PPM: 19.8% | No PPM: 22.2%  PPM: 25.0% | LVEF <45 No PPMI: 21.2%  PPMI: 17.9% | - | - | 29.6% | LVEF < 30: Females: 3.6% Males: 9.1% | LVEF <35% Sapien 3: 11.1%  Acurate neo: 4.1% |
| **Prior stroke** | 15.0% | No PPM: 12.6%  PPM: 13.5% | No PPM: 10.1%  PPM: 10.7% | - | - | 12.7% | 18.4% | Sapien 3: 15.7% Acurate neo: 14.3% |
| **Peripheral arterial disease** | 25.2% | - | - | - | - | 33.5% | 31.8% | Sapien 3: 18.7%  Acurate neo: 14.3% |
| **COPD** | 32.4% | - | - | - | - | 37.3% | 26.5% | Sapien 3: 18.2% Acurate neo: 14.3% |
| **eGFR <60** | - | No PPM: 32.5%  PPM: 23.1% | No PPM: 9.7%  PPM: 11.9% | No AV block: 24%  AV block: 28% | - | 67.7% | 35.6% | - |
| **ESRD on dialysis** | - | - | - | - | - | - | 2.5% | - |
| **STS-PROM score (%)** | No PPM: 8.7 Old PPM: 9.7 New PPM: 8.1 | No PPM: 6.8 PPM: 6.2 | No PPM: 6.6 PPM: 6.7 | - | - | - | Females: 7.5 Males: 7.5 | - |
| **Pulmonary hypertension** | - | - | - | 21% | - | 28.8% | - | Sapien 3: 21.2%  Acurate neo: 14.3% |
| **mean aortic gradient (mmHg)** | No PPM: 49.3 Old PPM: 38.9 New PPM: 49.6 | No PPM: 61.9 PPM: 67.3 | No PPM: 64.1 PPM: 66.1 | - | - | 47.6 | Females: 41 Males: 40 | Sapien 3: 43 Acurate neo: 43 |
| **aortic valve area (cm2)** | 0.7 | No PPMI: 0.77 PPMI: 0.77 | No PPMI: 0.28 PPMI: 0.28 | - | - | 0.6 | Females: 0.6 Males: 0.7 | Sapien 3: 0.8 Acurate neo: 0.7 |

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|  | **Kostopoulou et al. (2015)** | **Ledwoch et al. (2013)** | **Leong et al. (2017)** | **Maeno et al. (2019)** | **Malebranche et al. (2021)** | **Mangieri et al. (2018)** | **Marzahn et al. (2017)** |
| **Age in years** | No PPM: 82 PPM: 78 | PPM/ICD (+): 82.0 PPM/ICD (-): 81.5 | No PPM: 80.2 PPM: 80.9 | PPM: 81.4 No PPM: 81.8 | 83 | Late PPM: 85.1 No late PPM: 83.7 | No PPM: 80.3  PPM: 81.5 |
| **Female %** | Total: 40%  No PPM: 34%  PPM: 60% | 40.8% | Total: 50.7% No PPM: 62.2%  PPM: 36.7% | PPM: 25.7%  No PPM: 42.6% | No PPM: 53%  PPM: 44% | Late PPM: 51.8%  No late PPM: 56.7% | No PPM: 55.3%  PPM: 57.9% |
| **BMI, kg/m2** | - | PPM/ICD (+): 26.7 PPM/ICD (-): 26.9 | - | PPM: 28.0 No PPM: 27.0 | - | - | No PPM: 27.9 PPM: 27.2 |
| **Diabetes** | 27% | 34.2% | 30.0% | PPM: 31.4%  No PPM: 31.2% | No PPM: 26%  PPM: 28% | Late PPM: 37.1%  No late PPM: 29.8% | No PPM: 38.4  PPM: 36.6% |
| **Dyslipidemia** | - | - | - | PPM: 91.4%  No PPM: 92.2% | - | - | - |
| **Hypertension** | 100% | - | 79.1% | PPM: 85.7%  No PPM: 94.9% | No PPM: 87%  PPM: 87% | Late PPM: 79.6%  No late PPM: 79.1% | - |
| **Coronary artery disease** | 44% |  | 76.1% | PPM: 60.0%  No PPM: 60.5% | No PPM: 58%  PPM: 64% | Late PPM: 40.7%  No late PPM: 33.9% | No PPM: 43.6%  PPM: 40.0% |
| **Previous PCI** | - | PPM/ICD (+): 33.4%  PPM/ICD (-): 34.2% | - | - | - | - | No PPM: 36.4%  PPM: 34.5% |
| **Previous CABG** | - | PPM/ICD (+): 18.9%  PPM/ICD (-): 16.2% | - | - | - | Late PPM: 24.1%  No late PPM: 17.5% | No PPM: 13.1%  PPM: 9.7% |
| **Heart failure** |  |  |  |  |  |  |  |
| **NYHA I-II** | NYHA II: 27% | NYHA I: 1.1%  NYHA II: 10.7% | - |  | - | - | - |
| **NYHA III-IV** | NYHA III: 73% | NYHA III: 70.6%  NYHA IV: 17.6% | - | PPM: 94.3%  No PPM: 95.1% | - | Late PPM: 51.8%  No late PPM: 60.8% | - |
| **LVEF>40** | No PPM: 49 PPM: 51 | PPM/ICD (+): 53.35 PPM/ICD (-) 53.43 | - | PPM: 59.3 No PPM: 61.5 | No PPM: 60 PPM:: 60 | Late PPM: 51.7 No late PPM: 51.9 | No PPM: 55.0 PPM: 60.0 |
| **LVEF <40** | - | - | No PPM: 10.8%  PPM: 20% | - | - | - | LEVF <35% No PPM: 10.8%  PPM: 7.6% |
| **Prior stroke** | 0% | PPM/ICD (+): 7.5%  PPM/ICD (-): 8.4% | - | PPM: 17.1%  No PPM: 22.0% | No PPM: 11%  PPM: 9% | Late PPM: 16.6%  No late PPM: 16.5% | - |
| **Peripheral arterial disease** | - | PPM/ICD (+): 31.1%  PPM/ICD (-): 30.4% | - | PPM: 17.1%  No PPM: 28.8% | - | Late PPM: 33.3%  No late PPM: 27.6% | - |
| **COPD** | - | PPM/ICD (+): 25.1%  PPM/ICD (-): 24.2% | No PPM: 16.2%  PPM: 16.7% | PPM: 25.7%  No PPM: 25.9% | - | Late PPM: 22.2%  No late PPM: 27.6% | - |
| **eGFR <60** | Renal insufficiency 16% | PPM/ICD (+): 60.9%  PPM/ICD (-): 59.5% | CKD: No PPM: 24.3%  PPM: 23.3% | - | No PPM: 34%  PPM: 31% | - | No PPM: 48.1% TAVI with PPM: 54.5% |
| **ESRD on dialysis** | - | - | - | - | - | Late PPM: 1.8%  No late PPM: 35% | - |
| **STS-PROM score (%)** | - | - | - | - | No PPMI: 3.69 PPMI: 3.99 | Late PPM: 6.8 No late PPM: 6.9 | - |
| **Pulmonary hypertension** | - | - | - | - | - | Late PPM: 40.7% No late PPM: 36.9% | - |
| **mean aortic gradient (mmHg)** | - | PPM/ICD (+): 47.94 PPM/ICD (-): 48.90 | - | PPM: 47.0 No PPM: 46.0 | - | Late PPM: 42.9 No late PPM: 41.6 | No PPM: 42.0 PPM: 43.0 |
| **aortic valve area (cm2)** | - | PPM/ICD (+): 0.72 PPM/ICD (-): 0.65 | - | PPM: 0.63 No PPM: 0.65 | No PPM: 0.63 PPM: 0.66 | - | - |

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|  | **Mazzella et al. (2020)** | **Meduri et al. (2019)** | **Monteiro et al. (2017)** | **Mouillet et al. (2015)** | **Nadeem et al. (2018)** | **Nazif et al. (2015)** | **Nishiyama et al. (2016)** | **Pellegrini et al. (2018) A** |
| **Age in years** | Overall: 78.44 No PPM: 78.31 PPM: 79.37 | No PPM: 82 PPM: 83 | PPM: 82.5 No PPM: 81.1 | 82.1 | PPM: 81.6 No PPM: 81.2 | New PPM: 84.8 No PPM: 84.2 | Overall: 84 No LBBB: 84 New LBBB and PMI: 84 | With PPM: 81 No PPM: 80 |
| **Female %** | Overall: 51.6%  No PPM: 51.3%  With PPM: 53.5% | No PPM: 51%  With PM: 50% | With PPM: 40.7%  No PPM: 55.0% | 41.3% | With PPM: 43.2%  No PPM: 51.7% | New PPM: 53.8%  No PPM: 51.4% | Overall: 70%  No LBBB: 70% New LBBB and PMI: 80% | With PPM: 64%  No PPM: 52% |
| **BMI, kg/m2** | - | No PPM: 29 With PPM: 31 | - | - | - | - | Overall: 22.2 No LBBB: 21.9 New LBBB and PMI : 22.6 | With PPM: 28 No PPM: 27 |
| **Diabetes** | Overall: 39.2%  No PPM: 39.5%  With PPM: 37.2% | No PPM: 30%  With PPM: 34% | With PPM: 34.8%  No PPM: 31.6% | 24.9% | PPM: 43.2%  No PPM: 40.5% | New PPM:  No PPM: | Overall: 23%  No LBBB: 24%  New LBBB and PMI: 20% | PPM: 36%  No PPM: 32% |
| **Dyslipidemia** | - | - | PPM: 48.9%  No PPM: 48.6% | - | - | New PPM: 84.4% No PPM: 83.0% | - | - |
| **Hypertension** | Overall: 88.2%  No PPM: 88.8%  With PPM: 83.7% | No PPM: 92%  With PPM: 94% | With PPM: 70.4%  Without PPM: 76.1% | 67.9% | PPM: 97.3%  No PPM: 91.1% | New PPM: 9.6% No PPM: 91.9% | Overall: 70%  No LBBB: 64%  New LBBB and PMI: 90% | - |
| **Coronary artery disease** | - | No PPM: 70%  With PPM: 72% | PPM: 13.3%  No PPM: 14.4% | 46.6% (403/833) | Prior MI PPM: 17.1% (25/146) No PPM: 20.0% (105/526) | New PPM: 80.9% No PPM: 75.8% | Overall: 34% (31/90) No LBBB: 36% (25/70) New LBBB and PMI: 30% (6/20) | - |
| **Previous PCI** | Overall: 33.1% (115/347) No Pacemaker: 32.2% (98/304) Pacemaker: 39.5% (17/43) | No PPM: 30% (138/459) With PPM: 32% (79/245) | PPM: 31.9%  No PPM: 34.0% | - | PPM: 29.5%  No PPM: 23.6% | New PPM: 40.1% No PPM: 37.7% | Overall: 23%  No LBBB: 23%  New LBBB and PMI: 25% | PPI: 37%  No PPI: 38% |
| **Previous CABG** | Overall: 15.9%  Without PPM: 16.8%  With PPM: 9.3% | No PPM: 24%  PPM: 25% | PPM: 23.0%  No PPM: 16.3% | 18.4% | PPM: 32.9%  No PPM: 21.5% | New PPM: 42.2% No PPM: 40.3% | Overall: 1%  No LBBB: 1%  New LBBB and PMI: 0% | PPI: 8%  No PPI: 8% |
| **Heart failure** |  |  |  |  |  |  |  |  |
| **NYHA I-II** | Overall: 18.4%  No PPM: 17.8% (54/304) With PPM: 23.3% | - | PPM: 20.7%  No PPM: 18.3% | 24.0% | - |  | - | - |
| **NYHA III-IV** | Overall: 71.2%  No PPM: 71.7%  With PPM: 67.4% | - | PPM: 79.3%  No PPM: 81.7% | 75.8% | PPM: 63.0%  No PPM: 70.2% | NYHA III: 48.8% NYHA IV: 46.0% | Overall: 43%  No LBBB: 51%  New LBBB and PMI: 65% | PPM: 83%  No PPM: 71% |
| **LVEF>40** | - | - | PPM: 60.7% No PPM: 59.0% | 52.9 | PPM: 54.8% No PPM: 52.8% | New PPM: 53.5 No PPM: 53.9 | - | - |
| **LVEF <40** | - | No PPM: 8.8%  PPM: 4.5% | - | - | - | - | - | LVEF < 35% PPM: 10%  No PPM: 9% |
| **Prior stroke** | Overall: 12.7% (44/347) No PPM: 12.8%  PPM: 11.6% | No PPM: 13% ( PPM: 12% | PPM: 9.6%  No PPM: 8.0% | 9.5% | PPM: 18.5%  No PPM: 12.4% | New PPM: 20.0% No PPM: 26.7% | - | PPM: 9%  No PPM: 13% |
| **Peripheral arterial disease** | Overall: 21.6%  No PPM: 20.7%  PPM: 27.9% | No PPM: 28%  PPM: 30% | PPM: 13.3%  No PPM: 15.9% | 18.8 % | PPM: 25.3%  No PPM: 20.5% | New PPM: 41.4% No PPM: 43.4% | - | PPM: 10%  No PPM: 12% |
| **COPD** | - | No PPM: 16%  PPM: 21% | PPM: 22.2%  No PPM: 18.3% | 27.2% | PPM: 37.7%  No PPM: 34.2% | New: 48.0% No PPM: 45.9% | - | PPM: 21%  No PPM: 17% |
| **eGFR <60** | - | - | PPM: 71.1%  No PPM: 76.8% | - | PPM: 42.5%  No PPM: 45.6% | SCr ≥ 2 PPM: 16.8% No PPM: 16.2% | - | - |
| **ESRD on dialysis** | - | No PPM: 1.1%  PPM: 0% | - | 3.1% | - | - | - | - |
| **STS-PROM score (%)** | - | No PPM: 6.5 PPM: 6.8 | PPM: 11.1 No PPM: 10.2 | 14.10% | PPM: 7.1 No PPM: 7.7 | New PPM: 11.5 No PPM: 11.3 | - | - |
| **Pulmonary hypertension** | - | - | PPM: 17.8%  No PPM: 21.3% | 17.4% | - | New PPM: 39.4% No PPM: 37.9% | - | - |
| **mean aortic gradient (mmHg)** | - | No PPM: 45 PPM: 45 | PPM: 52.8 No PPM: 49.5 | 48 | PPM: 41.5 No PPM: 41.3 | New PPM: 45.20 No PPM: 45.54 | Overall: 48.0 No LBBB: 48.1 New LBBB and PMI: 50.0 | PPM: 43 No PPM: 45 |
| **aortic valve area (cm2)** | - | No PPM: 0.7 PPM: 0.7 | PPM: 0.65 No PPM: 0.67 | 0.7 | PPM: 0.76 No PPM: 0.76 | New PPM: 0.63 No PPM: 0.65 | Overall: 0.66 No LBBB: 0.67 New LBBB and PMI: 0.63 | - |

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|  | **Pellegrini et al. (2018) B** | **Pollari et al. (2019)** | **Raelson et al. (2017)** | **Rodriguez-Olivares et al. (2016)** | **Sannino et al. (2018)** | **Schewel et al. (2018)** | **Sharma et al. (2017)** | **Shivamurthy et al. (2020)** |
| **Age in years** | PPM: 81.1% No PPM: 80.8% PPM/New-onset CA Yes: 81.5% No: 80.4% | No HDAVB: 81.6% Transient HDAVB: 83.5% Permanent HDAVB: 81.2% | No PPM: 84% New PPM: 87% | New PPM: 82.5% No PPM: 80.0% | Females: 82.0% Males: 80.9% | No PPM: 81.0% New PPM: 82.4% | No PPM: 82.2% Non-RVPD: 80.4 RVPD: 80.9% | No PPM: 78.77% PPM: 81.4% |
| **Female %** | PPM: 64.3%  No PPM: 60.8%  PPM/New-onset CA Yes: 66.0%  No: 59.2% | No HDAVB: 53%  Transient HDAVB: 43%  Permanent HDAVB: 46% | No PPM: 57%  New PPM: 50% | New PPM: 44.1%  No PPM: 50.4% | 46.5% | All: 56.5%  New PPM: 57.4% | No PPM: 46.2%  Non-RVPD: 47.1%  RVPD: 25.0% | No PPM: 46.7%  PPM: 53.3% |
| **BMI, kg/m2** | PPM: 29.3% No PPM: 27.2% PPM/New-onset CA Yes: 28.4% No: 27.3% | No HDAVB: 27.1% Transient HDAVB: 25.1% Permanent HDAVB: 27.0% | - | New PPM: 25.8%  No PPM: 26.3% | Females: 28.7% Males: 27.5% | No PPM: 26.1% New PPM: 25.9% | No PPM: 27.2% Non-RVPD: 29.1% RVPD: 25.0% | - |
| **Diabetes** | - | - | New PPM 21% | New PPM: 25.0%  No PPM: 29.9% | Females: 37.7%  Males: 42.0% | No PPM: 31.1%  New PPM: 26.2% | No PPM: 34.8%  Non-RVPD: 58.8%  RVPD: 25.0% | No PPM: 41.7%  PPM: 42.2% |
| **Dyslipidemia** | PPM: 35.7%  No PPM: 43.1%  PPM/New-onset CA Yes: 41.5%  No: 40.8% | - | - | - | Females: 72.7%  Males: 74.8% | No PPM: 40.6%  New PPM: 27.9% | - | No PPM: 8.8%  PPM: 15.5% |
| **Hypertension** | PPM: 96.4%  No PPM: 96.1%  PPM/New-onset CA Yes: 96.2%  No: 96.1% | - | New PPM 90% | New PPM: 76.5%  No PPM: 60.5% | Females: 88.0%  Males: 82.9% | No PPM: 85.7%  New PPM: 75.4% | No PPM: 92.0%  Non-RVPD: 88.2%  RVPD: 62.5% | No PPM: 92.8%  PPM: 95.5% |
| **Coronary artery disease** | PPM: 46.4%  No PPM: 61.6%  PPI/New-onset CA Yes: 54.7%  No: 62.6% | Recent MI No HDAVB: 4%  Transient HDAVB: 0%  Permanent HDAVB: 8% (2/26) | New PPM 58% | Prior MI New PPM: 14.7%  No PPM: 21.8% (51/234) | Females: 63.1%  Males: 74.7% | No PPM: 60.8%  New PPM: 54.1% | No PPM: 78.1%  Non-RVPD: 82.4%  RVPD: 62.5% | - |
| **Previous PCI** | - | No HDAVB: 33%  Transient HDAVB: 38%  Permanent HDAVB: 61% | - | - | Previous CABG/PCI Females: 36.8%  Males: 56.9% | - | No PPM: 36.8%  Non-RVPD: 17.6%  RVPD: 37.5% | No PPM: 30.3%  PPM: 27.7% |
| **Previous CABG** | PPM: 14.3%  No PPM: 9.4%  PPI/New-onset CA Yes: 17.0% No: 8.9% | No HDAVB: 16%  Transient HDAVB: 14%  Permanent HDAVB: 19% | - | New PPM: 20.6%  No PPM: 22.6% | Previous CABG/PCI Females: 36.8%  Males: 56.9% | - | No PPM: 32.8%  Non-RVPD: 41.1%  RVPD: 25% | No PPM: 23%  PPM: 21% |
| **Heart failure** |  |  |  |  |  |  |  |  |
| **NYHA I-II** |  | - | - | - | - | - | - | - |
| **NYHA III-IV** | PPM: 85.7%  No PPM: 81.2%  PPI/New-onset CA Yes: 88.7%  No: 81.0% | - | - | New PPM: 75.0%  No PPM: 78.5% | - | - | - | - |
| **LVEF >40** | - | No HDAVB: 52.4 Transient HDAVB: 52.2% Permanent HDAVB: 56.6% | New PPM 56% | New PPM: 53.3% No PPM: 50.2% | Females: 57.1% Males: 52.3% | - | No PPM: 56.4% Non-RVPD: 52.1% RVPD: 59.4% | - |
| **LVEF <40** | LVEF <35% PPM: 7.1%  No PPM: 4.7%  PPI/New-onset CA Yes: 7.5%  No: 3.4% | - | - | - | Females: 13.3%  Males: 20.0% | - | - | - |
| **Prior stroke** | - | - | - | New PPM: 23.5%  No PPM: 22.2% | Females: 20.7%  Males: 19.8% | No PPM: 14.7%  New PPM: 19.7% | - | No PPM: 8.8%  PPM: 12.2% |
| **Peripheral arterial disease** | PPM: 3.6% No PPM: 11.8%  PPI/New-onset CA Yes: 11.3%  No: 10.1% | - | - | New PPM: 33.8%  No PPM: 24.8% | Females: 29.4%  Males: 35.3% | No PPM: 16.9%  New PPM: 13.1% | No PPM: 14.4%  Non-RVPD: 23.5%  RVPD: 12.5% | No PPM: 40%  PPM: 43.3% |
| **COPD** | PPM: 7.1%  No PPM: 14.1%  PPI/New-onset CA Yes: 17.0%  No: 14.5% | No HDAVB: 20%  Transient HDAVB: 0%  Permanent HDAVB: 15% | - | - | Females: 21.9%  Males: 21.9% | No PPM: 18.1%  New PPM: 19.7% | No PPM: 18.4%  Non-RVPD: 11.8%  RVPD: 12.5% | No PPM: 44.2%  PPM: 44.4% |
| **eGFR <60** | - | - | - | - | CKD Females: 45.0%  Males: 47.6% | No PPM: 31.1%  New PPM: 23.0% | No PPM: 48.3%  Non-RVPD: 58.8%  RVPD: 87.5% | - |
| **ESRD on dialysis** | - | - | - | - | Females: 2.6%  Males: 3.6% | No PPM: 2.4%  New PPM: 4.9% | - | - |
| **STS-PROM score (%)** | PPM: 6.7% No PPM: 5.3% PPI/New-onset CA Yes: 6.6% No: 5.0% | - | - | - | - | No PPM: 4.9% New PPM: 5.2% | - | - |
| **Pulmonary hypertension** | - | Severe pulmonary HPN No HDAVB: 35%  Transient HDAVB: 21%  Permanent HDAVB: 35% | - | - | Females: 74.8%  Males: 75.6% | No PPM: 18.7%  New PPM: 27.9% | - | - |
| **mean aortic gradient (mmHg)** | - | - | - | New PPI: 42.0 No PPI: 40.0 | Females: 46.4 Males: 43.2 | - | - | - |
| **aortic valve area (cm2)** | - | - | New PPM + Int: 0.67 | 0.7 | Females: 0.65 Males: 0.71 | - | No PPM: 0.66 Non-RVPD: 0.65 RVPD: 0.77 | - |

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|  | **Sinhal et al. (2008)** | **Stamou et al. (2019)** | **Urena et al. (2012)** | **Urena et al. (2013)** | **Van Gils et al. (2017)** | **Vejpongsa et al. (2018)** | **Wang et al. (2019)** | **Zhang et al. (2021)** |
| **Age in years** | No PDAVB: 84.8 PDAVB: 83.5 | ≤ 70 years: 9%  71-80 years: 22%  81-90 years: 59%  > 90 years: 9% | 80 | No PPM: 80 PPM: 81 | 83 | No PPM: 80.8 PPM: 81.6 | Males: 79 Females: 81 | No PM: 74.3 With PM: 77.9 |
| **Female %** | No PDAVB: 42.4%  PDAVB: 85.7% ( | No PPM: 42.1%  PPM: 44.5% | 59.9% | No PM: 52.2%  PPM: 53.6% | 36.6% | No PPM: 50.9%  PPM: 47.1% | 48.3% | No PPM: 45.2%  PPM: 50% |
| **BMI, kg/m2** | - | No PPM: 25.8 PPM: 27.8 | 27 | No PPM: 26 PPM: 27 | 27 | - | Males: 28.1 Females: 29.0 | - |
| **Diabetes** | - | No PPM: 33%  PPM: 39% | 33.2% | No PPM: 31.7%  PPM: 28.0% | 30% | No PPM: 38.1%  PPM: 39.7% | Males: 43.5%  Females: 34.3% | No PPM: 35.5%  PPM: 25% |
| **Dyslipidemia** | - | - | - | - | - | - | - | No PPM: 51.6%  PPM: 100% |
| **Hypertension** | - | No PPM: 89%  PPM: 89% | 88.1% | No PPM: 81.0%  PPM: 83.3% | - | No PPM: 79.8%  PPM: 82.2% | - | - |
| **Coronary artery disease** | - | Prior MI No PPM: 26%  PPM: 23% | 58.4% | No PPM: 58.1%  PPM: 46.9% | - | No PPM: 69.7%  PPM: 70.4% | Prior MI Males: 30.5%  Females: 16.7% | No PPM: 64.5%  PPM: 37.5% |
| **Previous PCI** | - | - | - | - | 39% | - | - | - |
| **Previous CABG** | - | No PPM: 23%  PPM: 18% | - | - | 16% | - | Males: 29.9%  Females: 8.3% | - |
| **Heart failure** |  |  |  |  |  |  |  |  |
| **NYHA I-II** | - | - | - | - | - | - | - | NYHA I: 7.7%  NYHA II: 20.5% |
| **NYHA III-IV** | No PDAVB: 86.9%  PDAVB: 85.7% | - | - | No PPM: 77.0%  PPM: 73.2% | 77% | - | - | NYHA III: 35.9%  NYHA IV: 35.9% |
| **LVEF>40** | No PDAVB: 60% PDAVB: 65% | - | 57% | No PPM: 55% PM: 56% | - | - | - | No PPM: 52.16% PPM: 51.00% |
| **LVEF <40** | - | No PPM: 17%  PPM: 19% | - | LVEF ≤ 50% No PPM: 30.2%  PM: 29.3% | - | - | - | - |
| **Prior stroke** | - | No PPM: 11%  PPM: 11% | - | - | 12% | No PPM: 11.0%  PPM: 7.4% | Prior stroke/TIA Males: 14.3%  Females: 16.7% | No PPM: 32.3%  PPM: 37.5% |
| **Peripheral arterial disease** | - | Carotid Stenosis No PPM: 17%  PPM: 19% | - | - | 22% | No PPM: 29.2%  PPM: 27.6% | Males: 9.1%  Females: 6.9% | No PPM: 29%  PPM: 37.5% |
| **COPD** | - | PPM group Mild: 12%  Moderate: 7%  Severe: 8% | 24.8% | No PPM: 31.1%  PPM: 30.5% | 30% | No PPM: 28.9%  PPM: 24.4% | Males: 26.0% Females: 15.3% | No PPM: 3.2%  PPM: 25% |
| **eGFR <60** | - | - | - | No PPM: 56.3%  PPM: 30.5% | - | CKD No PPM: 35.2%  PPM: 40.3% | - | - |
| **ESRD on dialysis** | - | - | - | - | - | - | - | - |
| **STS-PROM score (%)** | - | - | 7.5 | No PM: 7.7 PM: 7.2 | 6.3 | - | - | STS Mortality No PM: 2.97 PM: 4.00 |
| **Pulmonary hypertension** | No PDAVB: 22.2%  PDAVB: 42.9% | - | - | - | - | - | - | - |
| **mean aortic gradient (mmHg)** | - | No PPM: 45 PPM: 45 | 47 | No PPM: 47 PPM: 49 | - | - | - | No PM: 52.90 PM: 38.00 |
| **aortic valve area (cm2)** | - | - | 0.64 | No PPM: 0.60 PPM: 0.64 | - | - | - | No PM: 0.65 PM: 0.73 |

**Abbreviations:** AOD=arterial occlusive disease; BMI=body mass index; CA=Conduction abnormalities; CABG=Coronary artery bypass graft; COPD=Chronic obstructive pulmonary disease; ESRD=End-stage renal disease; HDAVB=high-degree AV block; ICD=implantable cardioverter defibrillator; LBBB=Left bundle branch block; LVEF=Left ventricular ejection fraction; NYHA=New York Heart Association; PCI=Percutaneous coronary intervention; PDAVB: pacemaker-dependent AV block; PPM=Permanent pacemaker; RVPD - RV pacing dependent; SAVR=Surgical aortic valve replacement; STS-PROM=Society of Thoracic Surgeons-Predicted Risk of Mortality

TAVI=Transcatheter aortic valve implantation; TAVR=Transcatheter aortic valve replacement