

Supplementary

Table S1 Considered variables in our analysis

| Variable | Overall (n=261) | No IE (n=214) | IE (n=47) | P value |
|--|-----------------|---------------|---------------|------------|
| Device, n (%) | 27 (10.3) | 20 (9.4) | 7 (14.9) | 0.29 |
| Prosthetic valve, n (%) | 34 (13.0) | 27 (12.6) | 7 (14.9) | 0.64 |
| Fever, n (%) | 144 (55.2) | 118 (55.1) | 26 (55.3) | >0.99 |
| Positive blood culture, n (%) | 112 (42.0) | 79 (36.9) | 33 (70.2) | <0.001 |
| Vascular phenomena, n (%) | 13 (5.0) | 8 (3.7) | 5 (10.6) | 0.06 |
| Heart defect, n (%) | 9 (3.5) | 6 (2.8) | 3 (6.4) | 0.21 |
| Drug abuse, n (%) | 6 (2.3) | 4 (1.9) | 2 (4.3) | 0.30 |
| Embolic disease, n (%) | 40 (15.3) | 23 (10.8) | 17 (36.2) | <0.001 |
| TEE positive, n (%) | 73 (28.0) | 31 (14.5) | 42 (89.4) | <0.001 |
| PET-CT | | | | |
| Conducted, n (%) | 45 (17.2) | 33 (15.4) | 12 (25.5) | 0.15 |
| Positive, n (% of all, % of conducted) | 7 (2.7, 15.6) | 3 (1.4, 9.1) | 4 (8.5, 33.3) | 0.03, 0.13 |

IE, infective endocarditis; TEE, transesophageal echocardiography; PET-CT, positron emission tomography-computed tomography.

Table S2 Calculating pretest probability prior to TEE

| Variable | Odds ratio (95% CI) | P value |
|------------------------|----------------------|---------|
| Device | 3.16 (2.03, 4.91) | <0.001 |
| Prosthetic valve | 1.10 (0.541, 2.25) | 0.79 |
| Fever | 1.44 (0.891, 2.33) | 0.14 |
| Positive blood culture | 0.566 (0.321, 0.998) | 0.049 |
| Vascular phenomena | 4.54 (1.62, 12.7) | 0.004 |
| Heart defect | 4.24 (0.581, 31.0) | 0.16 |
| Drug abuse | 5.55 (0.547, 56.3) | 0.15 |
| PET-CT | 1.80 (0.647, 5.01) | 0.26 |

TEE, transesophageal echocardiography; CI, confidence interval; PET-CT, positron emission tomography-computed tomography.

Table S3 Prediction of IE including TEE data

| Variable | Odds ratio (95% CI) | P value |
|------------------------|---------------------|---------|
| Device | 1.57 (0.917, 2.68) | 0.10 |
| Prosthetic valve | 1.87 (0.575, 6.08) | 0.30 |
| Fever | 0.952 (0.452, 2.01) | 0.90 |
| Positive blood culture | 0.535 (0.189, 1.52) | 0.24 |
| Vascular phenomena | 2.39 (0.471, 12.1) | 0.29 |
| Heart defect | 7.64 (0.277, 211) | 0.23 |
| Drug abuse | 54.0 (1.44, 2016) | 0.03 |
| TEE positive | 34.5 (6.76, 176) | <0.001 |
| PET-CT | 0.712 (0.172, 2.95) | 0.64 |

IE, infective endocarditis; TEE, transesophageal echocardiography; CI, confidence interval; PET-CT, positron emission tomography-computed tomography.

Table S4 Alternative metrics precision, recall and G-mean in the prediction of infective endocarditis

| Algorithm | Precision | Recall | G-mean |
|---------------------------|-----------|--------|--------|
| Duke score | 0.857 | 0.255 | 0.503 |
| Logistic regression | 0.676 | 0.979 | 0.937 |
| Neural nets-unbalanced | 0.571 | 0.710 | 0.793 |
| Neural nets-undersampling | 0.487 | 0.917 | 0.852 |
| Neural nets-SMOTE | 0.53 | 0.753 | 0.803 |

Table S5 Alternative metrics precision, recall and G-mean in the pretest probability prior to TEE

| Algorithm | Precision | Recall | G-mean |
|---------------------------|-----------|--------|--------|
| Logistic regression | 0.685 | 0.787 | 0.851 |
| Neural nets-unbalanced | 0.458 | 0.580 | 0.703 |
| Neural nets-undersampling | 0.404 | 0.743 | 0.754 |
| Neural nets-SMOTE | 0.506 | 0.624 | 0.736 |

TEE, transesophageal echocardiography.