

Tab. 2. Characteristics of a physiological ECG; any ECG findings other than those listed were considered abnormal

Parameter	Normal Values
Rhythm	sinus rhythm, including respiratory arrhythmia
Rate	below 100 beats/min
PQ interval	120-200 ms
QRS interval	below 120 ms
QT interval	below 450 ms
ST segment	no changes in ST segment
T wave	negative T wave in leads III, aVR, V1

Tab. 4. Reasons for unnecessary testing or surgery delay, with no change in pre-operative management

Aortic dilatation on CXR, TTE with only mild dilatation
Poorly described CXR image
Suspected pneumothorax, CT negative
Pulmonary congestion on CXR, TTE normal or insignificant
Pneumonia on CXR, but surgery urgent
CTI above 0.5, TTE with restrictive filling pattern
Pneumonia on CXR, pulmonary consult negative
Ischemic changes on ECG, biomarkers negative
Ischemic changes on ECG, TTE negative
Abnormal ECG, HCM on bed-side TTE, no risk or other change
Atrial fibrillation on ECG, TTE with mid-range ejection fraction
Abnormal ECG, TTE with reduced ejection fraction

CXR – chest X-ray; TTE – transthoracic echocardiography; CT – computed tomography; CTI – cardiothoracic index; ECG – electrocardiogram; HCM – hypertrophic cardiomyopathy

Tab. 3. Characteristics of an abnormal chest X-ray

Characteristic	Diagnosis
Cardiothoracic index above 0.5	aortic dilatation
pulmonary congestion	fluidothorax
mediastinal dilatation	pneumonia
atelectasis	tracheal deviation or stenosis
pleuritis	adhesions or post-inflammatory changes
emphysema	tumor or metastases
rib fractures	pneumothorax

A preoperative adjustment in beta-blocker or anti-arrhythmic therapy was recommended in 8 (0.34%) patients. An unnecessary test or delay in surgery, due to an abnormal ECG and CXR finding, occurred in 35 (1.48%) and 16 (0.68%) patients, respectively. Reasons for unnecessary tests and delays are listed in Table 4.

The relationship between selected patient characteristics and PCCS due to ECG and CXR findings is shown in Tables 5 and 6. All patients with a PCCS due to an SVT on the ECG had a significantly higher heart rate (HR) than those without an SVT (mean HR: 141 vs. 79 bpm, $p=0.001$). All patients with an SVT had an HR above 124 bpm. These patients were also significantly older than the others (mean 77 vs. 63 years, $p=0.048$), and all were over 71 years old. Further analysis showed that ages ≥ 72 years and heart rates ≥ 125 bpm were statistically significant predictors of a change in preoperative management, due to an abnormal ECG (Table 7). There

Tab. 5. Relationship between selected patient characteristics and surgery post-ponelement or cancelation, due to electrocardiogram findings

Parameter	Category	No Delay N = 2.358	PCCS N = 4	P
Age, y		63 (± 15)	77 (± 6)	0.048
Hypertension	No	1.029 (43.6)	1 (25.0)	0.637
	Yes	1.329 (56.4)	3 (75.0)	
Chronic coronary syndrome	No	1.971 (83.6)	1 (25.0)	0.016
	Yes	387 (16.4)	3 (75.0)	
Chronic heart failure	No	2.296 (97.4)	3 (75.0)	0.103
	Yes	62 (2.6)	1 (25.0)	
Ischemic or hemorrhagic stroke	No	2.154 (91.3)	3 (75.0)	0.305
	Yes	204 (8.7)	1 (25.0)	
Atrial fibrillation	No	2.167 (91.9)	2 (50.0)	0.036
	Yes	191 (8.1)	2 (50.0)	
Diabetes	No	1.820 (77.2)	4 (100.0)	0.580
	Yes	538 (22.8)	0 (0.0)	
Pulmonary disease	No	2.051 (87.0)	2 (50.0)	0.050
	COPD	132 (5.6)	1 (25.0)	
	AB	100 (4.2)	0 (0.0)	
	ACOS	14 (0.6)	0 (0.0)	
	Other	61 (2.6)	1 (25.0)	
BMI		27.8 (± 5.6)	29.6 (± 7.9)	0.402
Smoking	Non-smoker	1.379 (58.5)	2 (50.0)	0.062
	Smoker	702 (29.8)	0 (0.0)	
	Ex-smoker	277 (11.7)	2 (50.0)	
Potassium, mmol/l		4.24 (± 0.48)	4.13 (± 0.22)	0.556
CRP, mg/l		8 (3–42)	68 (5–157)	0.292
Systolic blood pressure, mmHg		139 (± 21)	128 (± 18)	0.299
Diastolic blood pressure, mmHg		80 (± 12)	71 (± 10)	0.144
Heart rate, beats/min		79 (± 16)	141 (± 15)	0.001

Values are the mean (\pm standard deviation), number (%), or median (interquartile range), as indicated. PCCS – postponement or canceling of surgery; SD – standard deviation; COPD – chronic pulmonary obstructive disease; AB – bronchial asthma; ACOS – asthma-COPD overlap syndrome; BMI – body-mass index; CRP – C-reactive protein; IQR – interquartile range