Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

were either on Dual Antiplatelet Therapy (DAPT) or not on any anticoagulation preoperatively and all 4 of these were discharged on DAPT. Total time in the procedure room was 67 (±22) minutes with 51(±22) minutes of anesthesia time. A single device was used in 92% (n=11). The mean LAA maximum size was 19 (±3) mm with least device compression 20% (±9). There were no complications. No patients had a peri-device leak at implant. One patient refused TEE at follow up. At follow-up imaging at least 45 days later there were no leaks >5mm with 91% (10/11) having no leak and 1 patient having a 4mm leak.
Conclusion: Zero fluoroscopy TEE guided Watchman FLX implantation is feasible and safe with no perceptible decrease in efficiency.

B-PO04-150

SPATIAL VENTRICULAR GRADIENT IS ASSOCIATED WITH INDUCIBLE VENTRICULAR ARRHYTHMIAS DURING ELECTROPHYSIOLOGY STUDY

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Background: The spatial ventricular gradient (SVG) is a vectorcardiographic measure of global electrical heterogeneity that has been associated with sudden cardiac death (SCD) in the general population. The association between SVG and inducibility of ventricular tachycardia (VT) or ventricular fibrillation (VF) during electrophysiology study (EPS) is unknown.
Objective: To test the association between SVG and inducible VT/VF during EPS.
Methods: We performed a retrospective study of patients presenting for EPS for evaluation of syncope or risk stratification of SCD prior to primary prevention ICD implantation between 6/2016-12/2020. 12-lead ECGs prior to EPS were converted to vectorcardiograms, and SVG magnitude, azimuth (direction in the XZ transverse plane), and elevation (direction in the XY frontal plane) were calculated. SVG components were dichotomized above and below their median values. Variables were compared with the t-test except for SVG azimuth (a circular variable), which was compared with the Mardia-Watson-Wheeler test. The odds of inducible VT/VF were regressed using a logistic model.
Results: Among 100 patients presenting for EPS (mean age 65.5 ± 12.1 y, 77% male, mean LVEF 46 ± 12 %), 20 had inducible VT/VF. Patients with inducible VT/VF had lower LVEF (40 ± 8 vs. 48 ± 12 %, p=0.017) and more posteriorly directed SVG azimuth (25.3 vs. 15.2 deg, p=0.01) than those who were non-inducible. Unadjusted logistic regression demonstrated that the OR for inducible VT/VF was 3.86 (95% CI 1.28-11.64, p=0.017) for SVG magnitude < 41.2 mv*ms and 8.07 (95% CI 2.19-29.78, p=0.002) for absolute SVG azimuth > 46.6 deg. SVG elevation, QRS duration, and QT interval were not associated with VT/VF. After adjustment for age, gender, LVEF, and prior MI, both SVG magnitude and absolute azimuth remained significantly associated with inducible VT/VF: adjusted OR for inducible VT/VF was 6.66 (95% C1.82-24.43, p=0.004) for SVG magnitude < 41.2 mv*ms and 7.53 (95% CI 1.81-31.35, p=0.005) for absolute SVG azimuth > 46.6 deg.
Conclusion: Smaller SVG magnitude and more extreme anterior or posterior SVG azimuth are associated with inducible VT/VF. SVG warrants prospective studies for risk stratification in patients undergoing EPS.

B-PO04-152

RISK OF SUDDEN CARDIAC DEATH IN COMPETITIVE ATHLETES DURING THE CONVALESCENT PHASE FOLLOWING COVID-19 INFECTION

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Background: The incidence of myocarditis or other cardiac injury among athletes in the convalescent phase following COVID-19 infection ranges from 1%-15%.
Objective: To determine the risk for ventricular arrhythmias (VA) and/or sudden cardiac death during recovery from COVID-19 among competitive athletes.
Methods: We prospectively evaluated professional and collegiate athletes (n=131) for cardiac injury/myocarditis a median of 21 days (IQR 16-29) following diagnosis of COVID-19 infection. Athletes underwent history and physical exam, biomarker testing, ECG, cardiopulmonary exercise testing (CPET) combined with echocardiography, and targeted cardiac MRI for those with initial abnormal clinical findings.
Results: Of 131 athletes (102 males/29 females) with median age 21 years (IQR 19-22), 2 (20%) of 10 athletes with VA (≥ 2 premature ventricular complexes) during CPET were diagnosed with cardiac injury/myocarditis compared to 3 (2.5%) of 121 athletes without VA (p=0.047; Table 1). CRP, persistence of symptoms, and QRS ≥ 120msec were also predictive of cardiac injury/myocarditis (Table 1). During a median follow-up of 69 (IQR 62-158) days, there have been no clinical sequelae among the 5 athletes (3.8%) diagnosed with cardiac injury/myocarditis who were totally restricted from exercise, as well as the 126 athletes who were cleared to train and compete.
Conclusion: We observed no arrhythmic events in athletes following COVID-19. Since we identified a small number of athletes with cardiac injury/myocarditis warranting restriction from exercise, the data suggests the need to carefully screen athletes prior to return to training or competition.

Comparison of athletes with and without diagnosis of myocarditis

	Myocarditis	No Myocarditis	p
N	5	126	
Median Age (IQR	19 (19,20)	21 (19,22)	NS
Sex (M/F)	2/3	100/26	0.072
Elevated CRP	2	4	0.017
Persisting symptoms	3	9	0.005
QRS ≥ 120 msec	2	2	0.007
LVEF (%)	56.0 ± 2.7	57.4 ± 4.5	0.166
Ventricular ectopy	2	8	0.047

B-PO04-153

SUBTLE REPOLARIZATION ABNORMALITIES IN IDIOPATHIC VENTRICULAR FIBRILLATION ARE UNCOVERED BY NONINVASIVE ELECTROCARDIOGRAPHIC IMAGING, BUT NOT THE 12-LEAD ELECTROCARDIOGRAM

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Background: Sudden cardiac arrest is most often due to ventricular fibrillation (VF). When no cause is found during diagnostic follow-up, fibrillation is classified as idiopathic VF. We hypothesize that subtle repolarization abnormalities may predispose to idiopathic VF, but cannot be detected from the 12-lead electrocardiogram (ECG).
Objective: To study the presence of repolarization time (RT) gradients in patients with idiopathic VF using the 12-lead ECG and noninvasive electrocardiographic imaging (ECGI).
Methods: In control individuals without cardiovascular disease and in survivors of idiopathic VF, we manually determined the heart-rate corrected QT interval (QTc) and the interval from