of CD and UC as age increases. Similarly, there is an increase in the prevalence of associated AF diagnosis [(CD-18-25 years:1.31%, 25-44 years:4.94%, 45-64:20.65%, >65:73.1%; p<0.0001); (UC-18-25 years:0.74%, 25-44 years:2.96%, 45-64:15.92%, >65:80.38%; p<0.0001)]. The highest prevalence of IBD and AF was in patients >65 years of age. There was no significant difference in the prevalence of AF in male and female patients with CD and UC over the years from 2003 to 2017 [(CD-M:47.74%, F: 52.26%); (UC - M:51.45%, F:48.55%)].

**Conclusion:** Our finding suggests that there has been an increasing prevalence of AF in patients hospitalized with CD and UC. Considering pathogenesis of AF is linked to systemic inflammation and IBD is associated with systemic inflammation, further studies are necessary to validate and better understand the underlying mechanisms.

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**PO-641-04**

**FUNCTIONAL MAPPING FOR ARRHYTHMOGENIC SUBSTRATE CHARACTERIZATION IS MORE EFFECTIVE IN HEARTS WITH LESS DISEASE REMODELING**

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**Background:** Functional mapping using multiple wavefront pacing (MWP) or decremental pacing (DP) can improve detection of critical sites for ventricular tachycardia (VT) on electroanatomic maps (EAMs). However, it is not well-established how the underlying disease remodeling distribution affects functional substrate characterization on EAMs.

**Objective:** To investigate how substrate characterization on EAMs generated by MWP and DP is affected by the patient-specific distribution of diseased-induced remodeling in the myocardium.

**Methods:** 48 clinical cardiac images were obtained from post-infarct patients undergoing VT ablation and used to reconstruct personalized heart models that represented the patient-specific disease remodeling. MWP was assessed from 50 endocardial and epicardial sites; DP entailed the delivery of a decremental stimulus at 310 ms after the initial at all sites (Fig.A). EAMs were simulated by calculating surface unipolar electrograms (Fig.A). From each EAM, voltage amplitude (VA), conduction velocity (CV), isochronal crowding (IC), fractionation index (FI), electrogram duration (ED), and frequency power (FP) were computed. Similarity between EAM characteristics was compared for different pacing locations and for initial and decremental stimuli (Fig.B,C).

**Results:** EAM similarity was associated with decreasing distance between pacing locations (r = -0.40 [VA], -0.80 [CV], -0.77 [IC], -0.81 [FI], -0.72 [ED], -0.49 [FP]; p<0.0005). The amount of disease remodeling was strongly correlated with EAM similarity between different pacing sites (r = 0.86 [VA], 0.69 [CV], 0.62 [IC], 0.71 [FI], 0.75 [ED], 0.90 [FP]; p<0.0005) (Fig. B). EAM similarity between initial and DP was also correlated with disease remodeling for most characteristics (r = 0.48 [IC], 0.73 [FI], 0.52 [ED], 0.31 [FP], p<0.05). In addition, DP improved detection of areas with high FI (1.47 cm² vs. 3.66 cm², p<0.0005). For different pacing sites, all EAM characteristics exhibited greater similarity in diseased versus non-diseased tissues (Fig. C). Between initial and DP, only IC and FI had increased similarity in diseased versus non-diseased tissues (Fig.C).

**Conclusion:** Mapping with MWP and DP may be more valuable for improving detection of arrhythmogenic VT substrate in hearts with less disease remodeling.

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**PO-641-05**

**SAFETY AND IN-HOSPITAL OUTCOMES OF LEFT ATRIAL APPENDAGE CLOSURE DEVICE IN PATIENTS WITH HEART FAILURE: AN ANALYSIS FROM THE NATIONAL INPATIENT SAMPLE DATABASE 2015-2018**