

Ethics Board (RIS HP #00041274). For each subject, ECG recordings were aligned using cross correlation analysis. Signals were filtered 0.5-35Hz using a 4th order butterworth filter and smoothed with a 3 point moving average. Then, sample by sample root mean square error (RMSE) was calculated for 30 sec of signals. The RMSE was 0.069 mV on average (0.032 to 0.185 mV). The RMSE expressed as a percentage of R-peak-to-peak amplitude was 5.3% on average (3.7% to 7.7%). The peak-to-peak amplitude was systematically higher with Skiin ECG with textile electrodes ($1.23 \pm 0.61 \text{ mV}$) compared to the clinical standard with gel electrodes ($0.83 \pm 0.52 \text{ mV}$), supposedly as gel electrodes were placed beneath the band, further from the heart. Table 1 presents the detailed results. To further compare the details of ECG waveforms, the average template beats were obtained for each 30 sec of recorded ECG, and plotted for each channel overlaid (Figure 1). Visual comparison highlighted that the wireless Skiin system with fully textile electrodes provided the same information as the clinical standard device with gel electrodes at sitting position.

CONCLUSION: The results obtained in this study show that the ECG obtained from the Skiin chest band at sitting position is comparable to the reference ECG system. The small difference in ECG amplitude was likely due to the slightly lower placement of the gel electrodes compared to the Skiin chest band.

Table 1 - RMSE values, average peak-to-peak amplitude, and RMSE as a percentage of R-peak-to-valley amplitude for Channels 1,2, and 3 for chest band data.

ID	Channel 1			Channel 2			Channel 3		
	RMS E (mV)	Average Peak-to-Peak Amplitude (mV)	RMSE as percentage of Peak-to-Peak Amp (%)	RMSE Ch2 (mV)	Average Peak-to-Peak Amplitude (mV)	RMSE as percentage of Peak-to-Peak Amp (%)	RMSE (mV)	Average Peak-to-Peak Amplitude (mV)	RMSE as percentage of Peak-to-Peak Amp (%)
ID01	0.068	1.541	4.4	0.151	2.943	5.1	0.185	3.481	5.3
ID02	0.056	0.677	5.3	0.070	1.266	5.6	0.067	1.185	5.6
ID03	0.078	1.605	4.9	0.065	0.983	6.6	0.083	1.554	5.4
ID04	0.041	1.106	3.7	0.079	1.418	5.6	0.090	1.983	4.5
ID05	0.046	1.121	4.1	0.043	0.749	5.8	0.038	0.708	5.3
ID06	0.054	1.097	4.9	0.102	1.823	5.6	0.095	1.821	5.2
ID07	0.046	0.917	5.0	0.069	1.392	5.0	0.074	1.532	4.8
ID08	0.055	0.962	5.7	0.053	0.872	6.1	0.061	0.963	6.3
ID09	0.032	0.792	4.1	0.068	1.456	4.7	0.051	1.349	3.8
ID10	0.052	1.122	4.7	0.046	0.593	7.7	0.077	1.082	7.2
Mean	0.051	1.094	4.7	0.075	1.349	5.8	0.082	1.566	5.3
Stdev	0.014	0.294	0.6	0.032	0.674	0.9	0.040	0.777	0.9

P081
RELATIONSHIPS BETWEEN LEFT VENTRICULAR MASS AND QRS DURATION IN HYPERTROPHIC CARDIOMYOPATHY AND HYPERTENSIVE HEART DISEASE: A NEW DIAGNOSIS TOOL

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BACKGROUND: LVH in hypertensive heart disease (HHD) is known to increase QRS duration while Hypertrophic Cardiomyopathy (HCM) could be associated with narrower than normal QRS expected. Current diagnosis of HCM and HHD is based on imaging but suffers from considerable overlap and lack of specific feature. We aim to compare the relationship between left ventricular mass (LVM) and QRS duration in HCM and HHD to create a new diagnostic tool to identify HCM.

METHODS AND RESULTS: We conducted a retrospective study in France (at the University Hospital of Toulouse and Bordeaux) and in Canada (at the University Cardiology and Pneumology Institute of Québec) comparing LV mass (LVM) and QRS duration according to different types of LV hypertrophy. Automatic measurement of LVM on MRI was correlated to automatic measurement of QRS duration on ECG. Uni- and multivariate analyses were performed comparing the relationship between QRS duration and LVM in HCM and HHD. A logistic regression formula was constructed with previously identified variables as associated with HCM

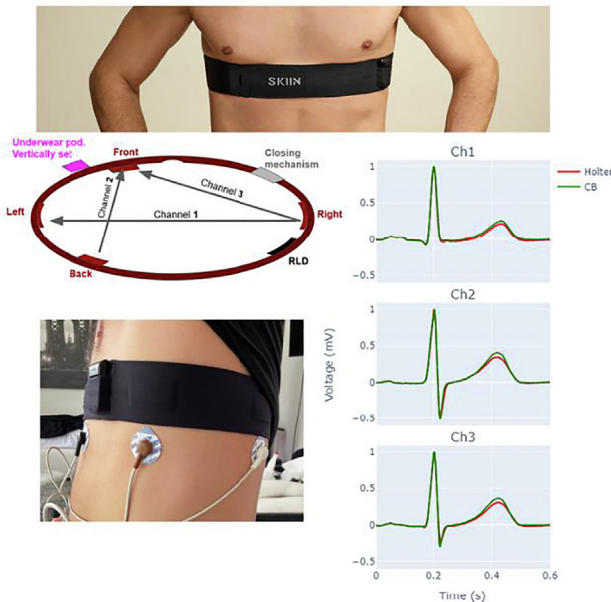
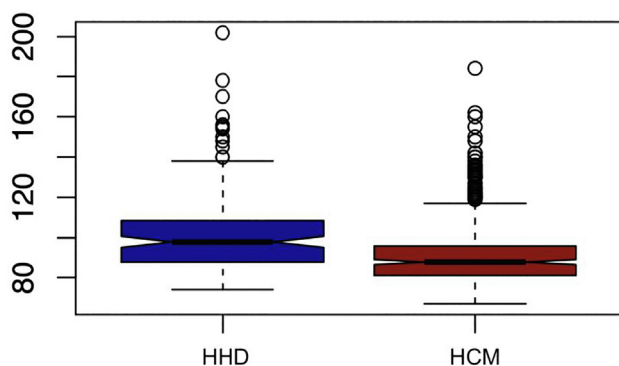


Figure 1 - Skiin Chestband (top); Lead definition and electrodes position around the chest (left middle); Gel electrode locations vs textile chestband (left bottom); Compared template ECG beats in 1 participant (textile in green, gel in red) (right).

diagnosis. The coefficient and Odds Ratio obtained from the final model were used to calculate the score. The score was then calculated for all patients, and the number of point threshold was chosen to obtain a highest sensibility and specificity. 686 patients were retrospectively included of whom 547 HCM (349 from France and 198 from Canada) and 139 HHD from France. Median QRS duration was 88 ± 16 ms for HCM and 98 ± 22 for HHD ($p < 0,01$). Median LVM was 91 ± 30 and 82 ± 31 g/m² respectively ($p=0,03$). QRS duration, LVM, hypertension, maximal wall thickness and LGE were significantly linked to HCM in multivariate analysis. An independent negative correlation was found between LVM and QRS duration in the HCM group, while the relationship was reverse in HHD. The HCM diagnostic score includes the following point assignments: High blood pressure +10 pts; MRI fibrosis +6 prs; QRS duration [>100]=0 pts [$90-100$]=+2 pts [< 90]=+6 pts; LVM (g/m²) [< 90]=0 pts, [$90-110$]=+1 pts, [$110-130$]=+2 pts, [>130]=+3 pts. A score higher than 7 is in favor of HCM with a sensitivity of 88% and a specificity of 70% (preliminary results).

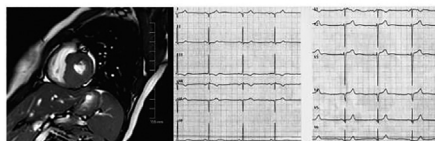
CONCLUSION: QRS duration increases with LVM in HHD and decreases with LVM in HCM. These relationships were independent of other parameters. This HCM-specific relationship could be used as a diagnostic tool in clinical practice. These results need to be confirmed in larger studies.

QRS duration (ms) between groups



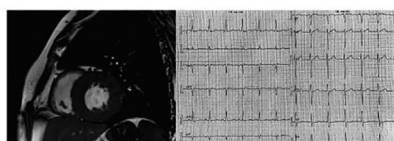
HCM patient

EKG with QRS measuring 80ms. Myocardial MRI with asymmetric hypertrophic remodeling and an estimated indexed left ventricular mass of 95 g/m².



HHD patient

EKG with QRS measuring 95ms. Myocardial MRI with concentric hypertrophic remodeling and an estimated indexed left ventricular mass of 82 g/m².



**P082
SAME-DAY DISCHARGE FOLLOWING ATRIAL FIBRILLATION ABLATION PROCEDURE**

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BACKGROUND: Complications following atrial fibrillation (AF) ablation have steadily decreased over the past decade. Following the global COVID-19 pandemic, significant pressure was put on electrophysiology labs to reduce their use of hospital beds. We sought to determine the feasibility as well as safety of same-day discharge following AF ablation procedure.

METHODS AND RESULTS: Between April 2020 and April 2022, 134 patients underwent an AF ablation in our institution and were scheduled to be discharged the same day. Among them, 86.6% (116) went home an average of 8.1 hours after the sheaths were pulled. As for the remaining 18 patients, the majority stayed because the procedure finished too late for the monitoring period to be complete and had no complications requiring an overnight stay. Of the remaining 5 patients, 3 stayed for groin bleed, 1 for minor pericardial effusion and 1 for pulmonary edema. All except the pulmonary edema patient went home the next day. As for the 116 patients who went home the same day, 9.5% (11) came back in the following week to the ER with either pericardial pain (7), shortness of breath (1), recurrent arrhythmia (1) or minor groin discomfort (3). All of them were safely discharged from the ER the same day.

CONCLUSION: Our data confirms that same-day discharge following AF ablation procedures is both safe and feasible as confirmed by the absence of any major complications in our single center experience. Some patients came back to the emergency room for expected post ablation discomfort, but none required an overnight stay.

**P083
SEX DIFFERENCES IN ATRIAL FIBRILLATION AND ATRIAL STRUCTURAL REMODELLING: INSIGHTS FROM HIGH-RESOLUTION BI-ATRIAL ELECTROANATOMIC MAPPING**

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BACKGROUND: Women are reported to have more AF recurrence following pulmonary vein isolation (PVI) than men, but the underlying mechanism has not been well studied. Structural remodelling, including atrial enlargement and low-voltage atrial myopathy, are important determinants of AF recurrence. Our aim was to compare bi-atrial structural remodelling between men and women with AF after controlling for age.

METHODS AND RESULTS: Patients with AF undergoing their first PVI were prospectively enrolled. Men (n=34) were age-matched 2:1 to women (n=17). Patients underwent high-resolution bi-atrial electroanatomic mapping (>2000 points per atrium) during right atrial (RA) pacing at 750ms. Low-voltage area