Abstract Submission Form

The Women's Heart Center Program Committee is accepting abstract submission forms through **August 16, 2024**. Completed forms should be emailed to WHC@TheChristHospital.com.

Abstract submissions should be gender- and sex-specific research pertaining to one of the program topics outlined below.

The Program Committee wishes to encourage young scientific investigators and will reward up to 4 abstracts/posters submitted by presenters considered early career (definition provided below). First place will receive $1000, second place will receive $500, and two honorable mentions will each receive $250.

The presenting author will be sent an email with the status of the submission by **August 30, 2024**. If your abstract is accepted, your notification will contain complete presentation information. However, please note the following:

- All human subject research must conform to the principles of the Declaration of Helsinki of the World Medical Association.
- The presenting author should be able to provide documentation of IRB approval if requested.
- The Program Committee is unable to reimburse presenters for travel, hotel, or per diem expenses.
- Submission of an abstract constitutes a commitment by the presenting author (or designee) to present in-person at the symposium on October 11, 2024, during the following times:
    - Registration & Networking: 7:00 – 8:00 am
    - Networking Lunch: 12:00 – 1:00 pm
    - Poster Session Award Announcement: 3:40 – 4:00 pm
- All accepted abstract presenters must register for the symposium via Eventbrite and pay the applicable registration fees (trainees and invited speakers will have the registration fee waived).
- If an author wishes to withdraw an abstract, please email WHC@TheChristHospital.com.

Presenting Author Information

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Early Career (Defined as physicians, scientists, medical students, and other healthcare providers currently in residency or fellowship programs or within three years of training)? Yes ☐ No ☒

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Disclosures: Please list any relevant financial disclosures.
N/A

Abstract Topic (must be gender- or sex-specific)

☐ Preventative cardiology	☐ General cardiology	☐ Interventional cardiology
☐ Heart failure	☐ Cardio-oncology	☐ Cardio-obstetrics
☐ Electrophysiology	☒ Cardiovascular Imaging	☒ Coronary Microvasculature
☐ Social Determinants of Health	☐ Mental Health	☐ Precision Medicine

Title: Include the full title as it will appear on the poster.

Differences in CMRI-Confirmed Cardiac Structure Between Patients with Angina or Ischemia with Non-obstructive Coronary Artery Disease (ANOCA/INOCA)

Background: In an initial paragraph, provide relevant information regarding the background and purpose of the study, preferably in no more than two to three sentences.

Around 40% of patients that undergo coronary angiography for stable angina have no evidence of obstructive coronary artery disease (NOCAD). Angina without evidence of ischemia on prior stress testing (ANOCA) and with evidence of ischemia on prior stress imaging (INOCA), are two common subgroups of NOCAD patients. Ischemia is associated with adverse structural remodeling in the heart, presenting as abnormalities to cardiac architecture, size, and function. However, there are limited studies comparing the differences in cardiac structure between ANOCA and INOCA patients.

Methods: Briefly state the methods used.

In a prospective registry-based cohort study of NOCAD patients (<50% stenosis of epicardial arteries) who underwent CMRI, we assessed differences in clinical characteristics, validated questionnaire scores, coronary functional angiography (CFA) diagnoses, and CMRI measures of cardiac structure and function between ANOCA and INOCA patients.

Results: Summarize the results in sufficient detail to support the conclusions.

This study included 96 ANOCA patients with a mean age of 57.3 ±11.3, and 81 INOCA patients with a mean age of 59.4±12.6. ANOCA patients had a significantly lower median Seattle Angina Questionnaire (SAQ-7) scores (38.5, p=0.018) which is indicative of more severe anginal symptoms and consistent with a higher proportion of epicardial spasm (30%, p=0.037) compared to INOCA patients. ANOCA patients had a significantly higher LV end-diastolic volume index (p=0.035), LV end-systolic volume index (p=0.044), and LV cardiac output (p=0.025). INOCA patients displayed elevated global native T1 (p=0.012) levels compared to ANOCA patients, consistent with the presence of ischemia. Although not statistically significant, INOCA patients trended towards more severe LV long-axis strain (p=0.076), experienced a slight increase in global peak wall thickness (p=0.193), and saw a decrease in their myocardial perfusion reserve index (p=0.151).

Conclusions: Concisely state the conclusions reached.

Similar overall degrees of adverse remodeling in ANOCA and INOCA patients suggest the importance of approaching these patients with similar clinical treatment and testing. The pattern of cardiac remodeling in ANOCA patients is suggestive of early-stage heart failure, warranting further investigation. Future work should also explore the relationship between epicardial spasm and its contribution to adverse cardiac remodeling in both ANOCA and INOCA patients.

Tables/Figures/Graphics: Include images that are part of your submission here. Images should be high resolution and have a file type of “gif”, “jpg”, or “jpeg”.

Table 1. Results	**ANOCA (N=96)**	**INOCA (N=81)**	**P-value**
Clinical Characteristics			
Age, mean ± SD	57.3 ± 11.3	59.4 ± 12.6	0.254
Female, N (%)	86 (91)	79 (99)	0.040
Hypertension, N (%)	59 (61)	50 (62)	0.971
Hyperlipidemia, N (%)	84 (88)	76 (94)	0.203
Validated Questionaires			
CCS Class, N (%)			0.604
1	19 (32)	13 (24)	
2	14 (24)	14 (26)	
3	15 (25)	19 (35)	
4	11 (19)	8 (15)	
[1]SAQ7, median (IQR)	38.5 (16.1, 55.0)	45.8 (30.0, 65.6)	**0.018**
[1]DASI, mean ± SD	34.8 ± 14.6	34.2 ± 13.7	0.821
[2]PSS, median (IQR)	13 (9, 16)	12 (9, 16)	0.431
[2]UCSD SOB, median (IQR)	35 (15, 53)	31 (14, 47)	0.468
CFA Outcomes (N, %)			
Endothelial Dependent CMD	24 (57)	14 (67)	0.466
Endothelial Independent CMD	26 (62)	16 (67)	0.699
Epicardial Spasm	13 (30)	2 (8)	**0.037**
CMRI Characteristics (Median, IQR)			
LV End Diastolic Volume Indexed (LVEDVi)	71.7 (62.7, 83.6)	66.5 (56.5, 78.6)	**0.035**
LV End Systolic Volume Indexed (LVESVi)	31.1 (25.3, 37.3)	28.6 (22.8, 34.7)	**0.044**
LV Ejection Fraction % (LVEF)	57.9 (53.5, 60.2)	57.5 (52.6, 62.0)	0.891
LV Cardiac Output (LVCO)	5.2 (4.4, 6.2)	4.8 (4.1, 5.5)	**0.025**
LV Mass Index (LVMI)	37.7 (31.3, 44.0)	38.7 (33.5, 44.8)	0.512
Global Peak Wall Thickness (GPWT)	9.98 (8.59, 11.78)	10.25 (8.86, 12.15)	0.193
LV long-axis strain	-18 (-19, -16)	-16 (-18, -14)	0.076
Global Native T1	1027 (1004, 1047)	1038 (1019, 1074)	**0.012**
Global Native T2, ms	51 (49, 53)	51 (49, 53)	0.457
Global ECV, ms	27 (26, 30)	28 (26, 31)	0.475
Myocardial Perfusion Reserve Index (MPRI)	2.20 (1.70, 2.53)	2.03 (1.67, 2.30)	0.151
LGE Present, n (%)	4 (5)	3 (4)	1.00

1=Lower score indicates adverse condition; 2=Higher score indicates adverse condition
CCS Class indicates Canadian Cardiovascular Society angina class; SAQ7, Seattle Angina Questionnaire; PSS, Perceived Stress Scale; DASI, Duke Activity Status Index; USCD SOB, University of California, San Diego Shortness of Breath Questionnaire. Proportion data was compared via chi-square, displayed as N, %. Means were compared via t-test and displayed as the group mean, standard deviation (SD). Non-normally distributed data was compared via Wilcoxon-rank sum test, represented as median (interquartile range, IQR).