



# 3<sup>rd</sup> Annual Women's Cardiovascular Symposium

Friday, October 11, 2024 | Cincinnati, Ohio

## 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](mailto: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](mailto:WHC@TheChristHospital.com).

## Presenting Author Information

Name (First, Last, Credentials): Karley Fischer, MD

Institutional Affiliation: Department of Internal Medicine, Kettering Health, Kettering, OH

Email Address: [Karley.fischer@ketteringhealth.org](mailto:Karley.fischer@ketteringhealth.org)

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

## Co-author Information

Name: Marvin Amen, MD Email: [marvin.amen@ketteringhealth.org](mailto:marvin.amen@ketteringhealth.org) Affiliation: Department of Cardiovascular Medicine, Kettering Health

Name: Damian Valencia, MD Email: [damian.valencia@ketteringhealth.org](mailto:damian.valencia@ketteringhealth.org) Affiliation: Department of Interventional Cardiology, Kettering Health

Name: Raja Nazir, MD Email: [raja.nazir@ketteringhealth.org](mailto:raja.nazir@ketteringhealth.org) Affiliation: Department of Interventional Cardiology, Kettering Health

Name: Brian Schwartz, MD Email: [brian.schwartz@ketteringhealth.org](mailto:brian.schwartz@ketteringhealth.org) Affiliation: Department of Interventional Cardiology, Kettering Health

**Disclosures:** Please list any relevant financial disclosures.

No relevant disclosures

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

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Preventative cardiology       | <input type="checkbox"/> General cardiology     | <input checked="" type="checkbox"/> Interventional cardiology |
| <input type="checkbox"/> Heart failure                 | <input type="checkbox"/> Cardio-oncology        | <input type="checkbox"/> Cardio-obstetrics                    |
| <input type="checkbox"/> Electrophysiology             | <input type="checkbox"/> Cardiovascular Imaging | <input type="checkbox"/> Coronary Microvasculature            |
| <input type="checkbox"/> Social Determinants of Health | <input type="checkbox"/> Mental Health          | <input type="checkbox"/> Precision Medicine                   |

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

Sex Differences in Incidence of Patient Prosthesis Mismatch Following Valve-in-Valve Transcatheter Aortic Valve Implantation

**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.

Female sex is associated with greater in-hospital mortality and 90 day readmissions following transcatheter aortic valve implantation (TAVI), without clear explanation. Female sex is a known risk factor for patient prosthesis mismatch (PPM), a complication following TAVI which negatively impacts functional status, valve longevity, morbidity, and mortality. Valve-in-valve (ViV) TAVI for treatment of degenerated bioprosthetic aortic valves has an even greater risk of PPM. There remains little evidence on sex differences in incidence of PPM following ViV-TAVI.

**Methods:** Briefly state the methods used.

A retrospective review of patients who underwent ViV-TAVI at Kettering Health from 2015 to 2021 were selected and divided into two groups (female and male). The degree of mismatch was measured by the indexed effective orifice area (iEOA), which is equal to the effective valve orifice area divided by the patient's body surface area. Moderate PPM is defined as iEOA  $<0.85 \text{ cm}^2/\text{m}^2$  (if BMI  $<30 \text{ kg}/\text{m}^2$ ) or  $<0.70 \text{ cm}^2/\text{m}^2$  (if BMI  $>30 \text{ kg}/\text{m}^2$ ). Severe PPM is defined as an iEOA  $<0.65 \text{ cm}^2/\text{m}^2$  (if BMI  $<30 \text{ kg}/\text{m}^2$ ) or  $<0.55 \text{ cm}^2/\text{m}^2$  (if BMI  $>30 \text{ kg}/\text{m}^2$ ). The average iEOA following ViV-TAVI in females versus males was analyzed with an unpaired t-test.

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

A total of 77 patients underwent ViV-TAVI. 57.14% (44 of the 77) were male, with an average age of 76.05 years and average BMI of  $28.77 \text{ kg}/\text{m}^2$ . 42.86% (33 of the 77) were female, with an average age of 77.63 years and average BMI of  $29.09 \text{ kg}/\text{m}^2$ . There was no statistically significant difference in average iEOA in females  $0.6700 \text{ cm}^2/\text{m}^2$  versus average iEOA in males  $0.7120 \text{ cm}^2/\text{m}^2$  [p=0.3704]. There was no significant difference in rates of BVF at time of ViV-TAV, 33.3% (11/33) versus 29.55% (13/44) in females versus males respectively. Severe PPM occurred in 33.3% (11/33) of females and 36.4% (16/44) of males.

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**Conclusions:** Concisely state the conclusions reached.

There was no statistically significant difference in iEOA following ViV-TAVI in females versus males. This suggests males and females have similar rates of PPM following ViV-TAVI supporting that appropriate selection of patient and valve size, as well as appropriate use of bioprosthetic valve fracture, plays a primary role in preventing PPM.

**Tables/Figures/Graphics:**

Figure 1: iEOA versus BMI in Female Patients. Dark plots represent female patients who underwent ViV-TAVI with BVF, light plots represent female patients who underwent ViV-TAVI without BVF.

### iEOA vs. BMI in Females

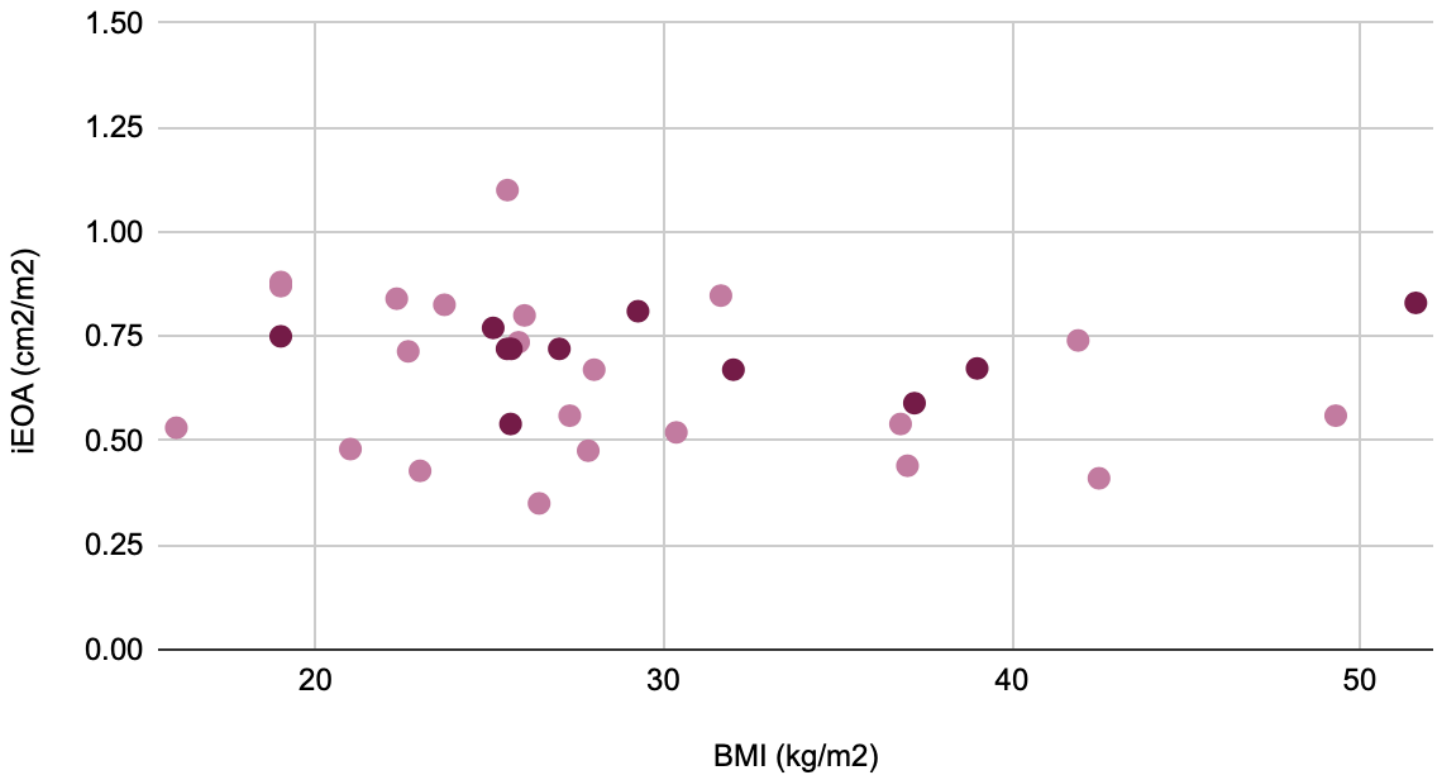


Figure 2: iEOA versus BMI in Male Patients. Dark plots represent male patients who underwent ViV-TAVI with BVF, light plots represent male patients who underwent ViV-TAVI without BVF.

### iEOA vs. BMI in Males

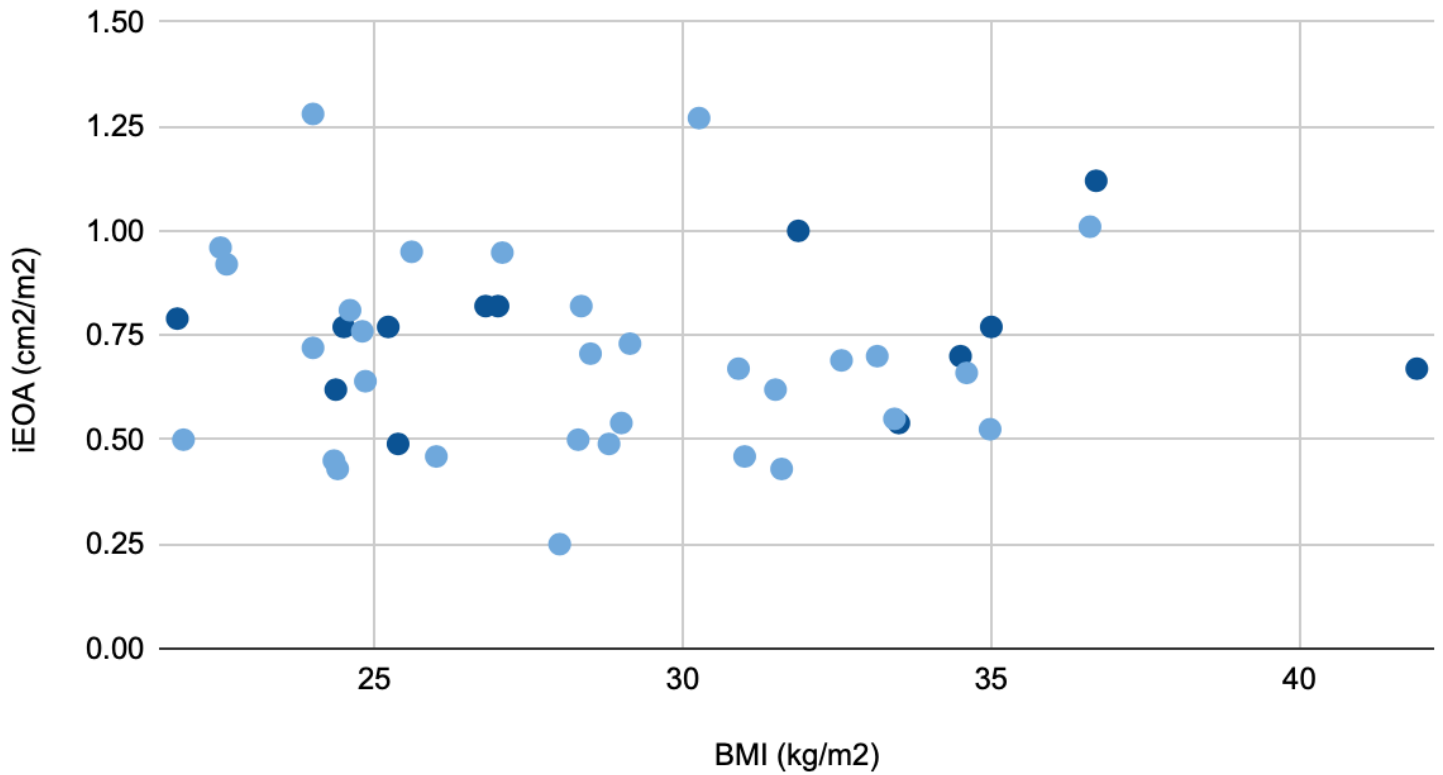
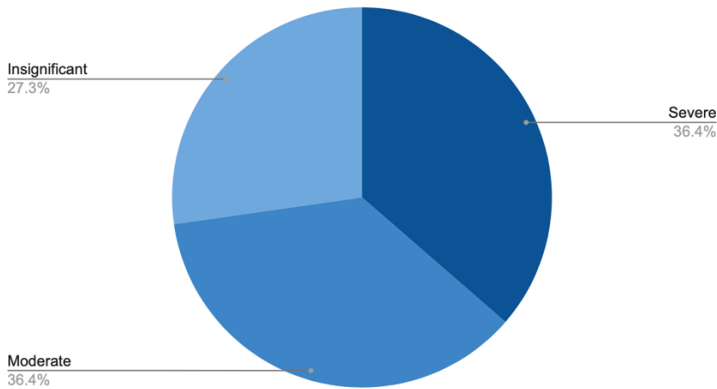


Figure 3: Incidence of Patient Prosthesis Mismatch in Males and Females

Incidence of Patient Prosthesis Mismatch in Males



Incidence of Patient Prosthesis Mismatch in Females

