

# Gender Differences in Morbidity and Mortality of Acute Coronary Syndromes in Northern Saskatchewan

Dmitry Neymark<sup>1</sup>, Nathan Braun<sup>1</sup>, Sabeena Khan<sup>1</sup>, Tony Haddad<sup>1</sup>, Idris Bare<sup>1</sup>, Jay Shavadia<sup>1</sup> and Haissam Haddad<sup>1</sup>

<sup>1</sup>USask Cardiovascular research group, College of Medicine, Department of Medicine, University of Saskatchewan

## INTRODUCTION

- Patients in remote communities in northern Saskatchewan are known to exhibit poorer cardiovascular health outcomes compared to the general population
- Limited data exists on the relationship between gender and acute coronary syndrome presentation among Northern Saskatchewan residents
- Developing a better understanding of patient demographics, prevalent comorbidities, and clinical outcomes is of the utmost importance in bridging the gaps in care in Northern Saskatchewan.

## OBJECTIVES

1. To describe baseline demographics of patient cohort from northern Saskatchewan
2. To compare clinical attributes and cardiovascular outcomes of male and female patients from northern Saskatchewan

## METHODS

### Study Design

- Prospective, single-site cohort analysis
- Consecutive ACS admissions (n=1950) at the Royal University Hospital, Saskatoon
- No exclusion criteria applied

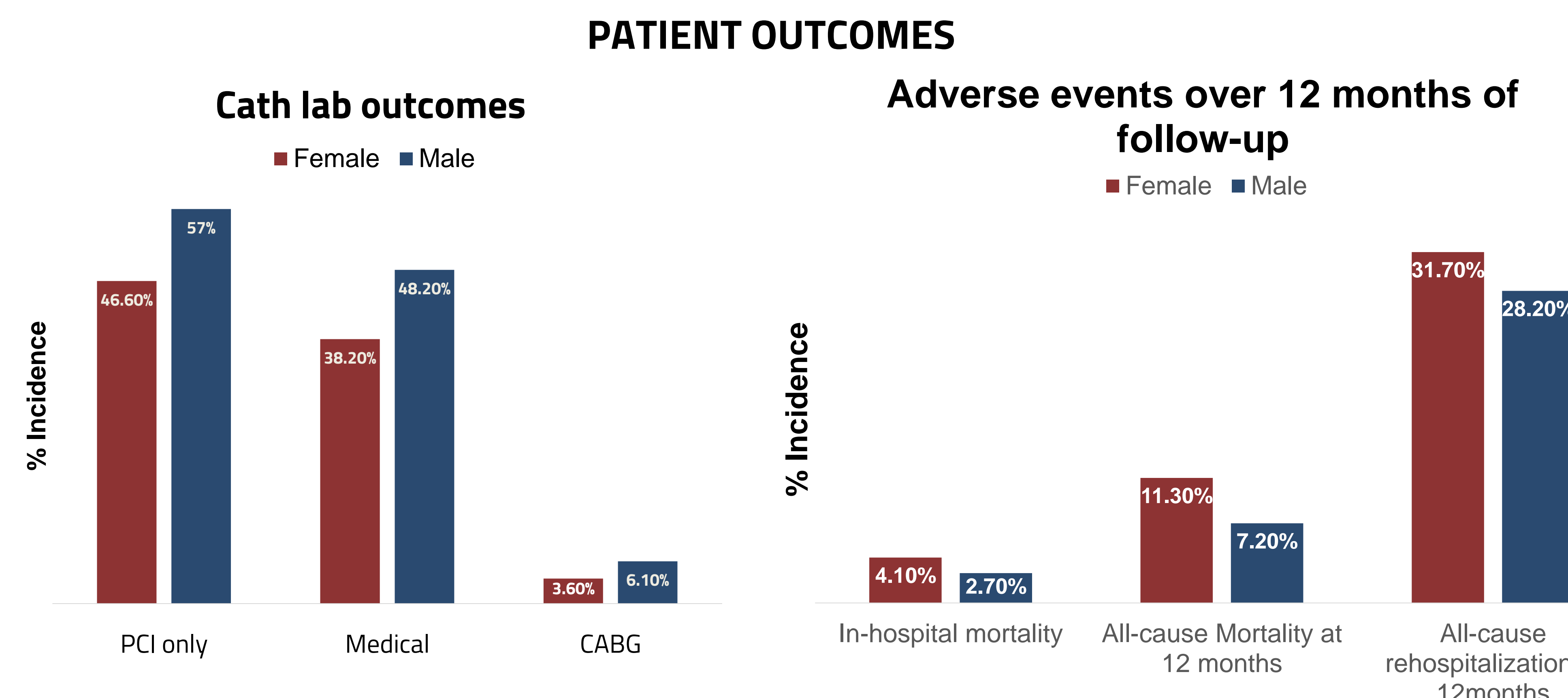
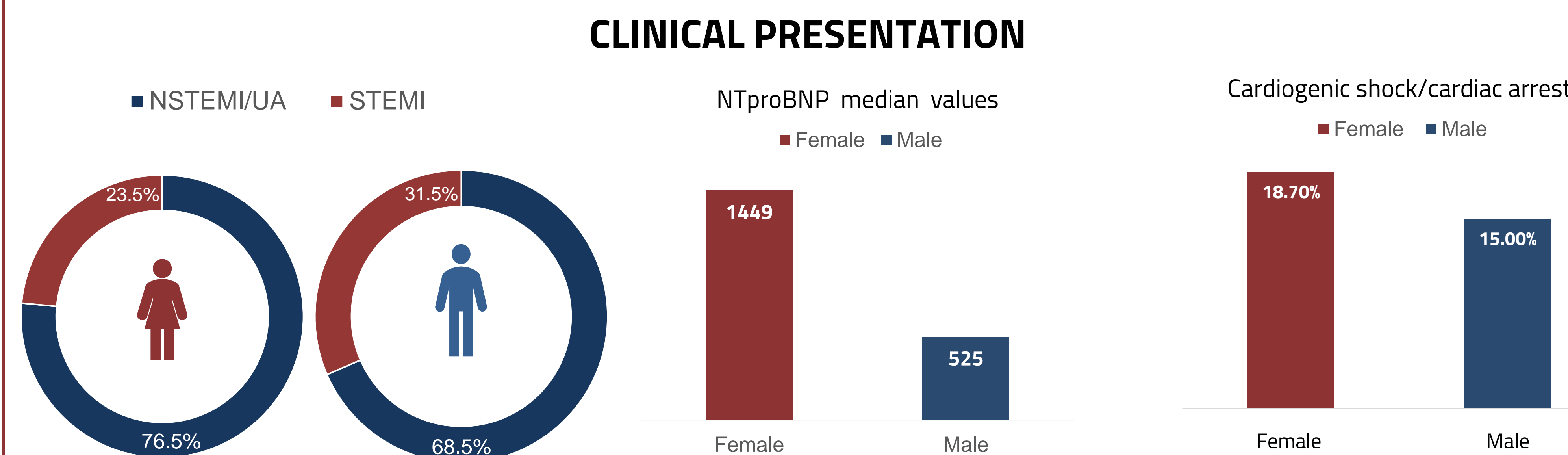
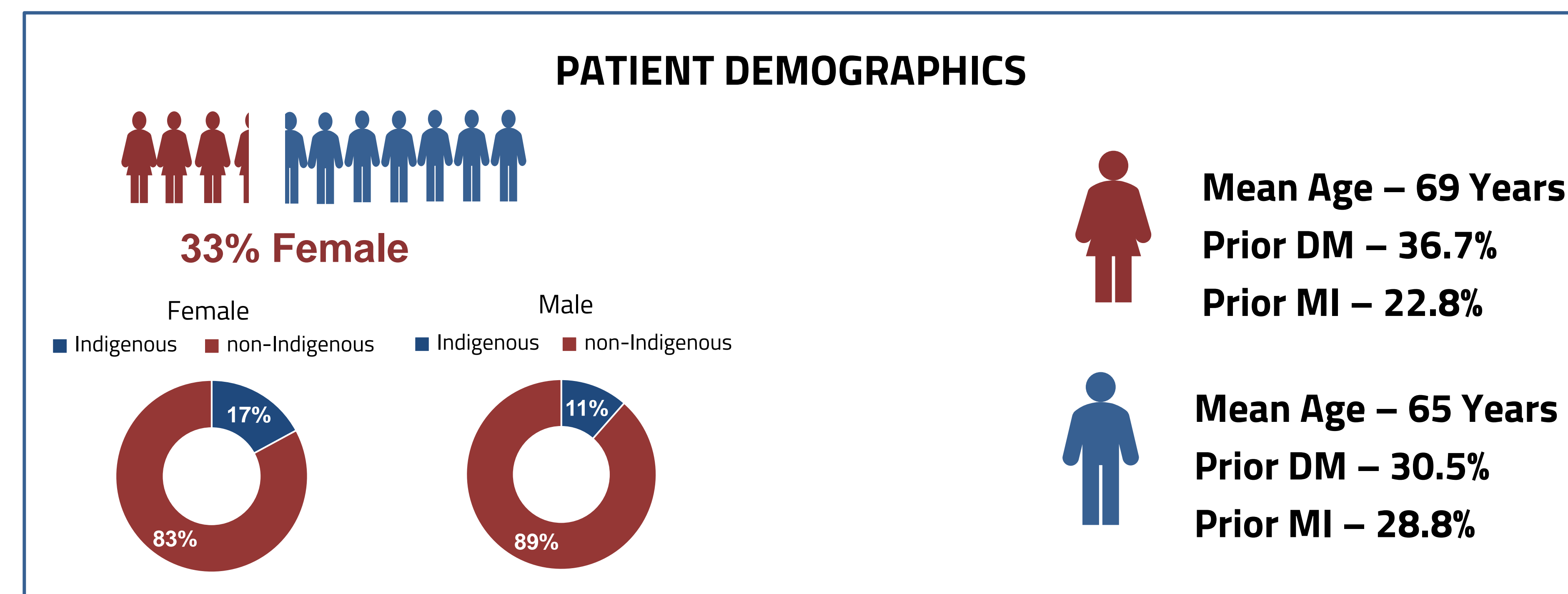
### Data Sources

- Data collected prospectively between March 15, 2019, to March 30<sup>th</sup>, 2021 at the ER of RUH.

### Variables

- Patient characteristics captured in our analysis included demographics, ACS presentation, comorbid conditions, and survival outcomes.

## RESULTS



## CONCLUSIONS

- Females in Northern Saskatchewan present more frequently as NSTEMI/UA and have a greater burden of underlying cardiovascular comorbidity
- Compared with males, females were less likely to need treatment with PCI and have higher unadjusted mortality rates at one-year.
- Evaluation of factors such as plaque burden, non-atherosclerotic ACS etiologies, intravascular imaging and proteomics may help understand these sex-related discrepant ACS outcomes in Saskatchewan.

## REFERENCES

- Akhter N, Milford-Beland S, Roe MT, Piana RN, Kao J, Shroff A, et al. Gender differences among patients with acute coronary syndromes undergoing percutaneous coronary intervention in the American College of Cardiology-National Cardiovascular Data Registry (ACC-NCDR). American heart journal. 2009;157(1):141-8.
- Bolijn R, Perini W, Tan HL, Galenkamp H, Kunst AE, van Valkengoed IG. Gender-related characteristics and disparities in estimated cardiovascular disease risk in a multi-ethnic general population: The HELIUS study. International Journal of Cardiology. 2021;327:193-200

## ACKNOWLEDGEMENTS

- This study was funded through grants from the Royal University Hospital Foundation (RUHF) and the College of Medicine, Department of Medicine, University of Saskatchewan