

**ABBREVIATIONS.....5**

**BACKGROUND.....7**

PHYSIOLOGICAL HEART FUNCTION .....8

HEART FAILURE .....9

*Overview.....9*

ACUTE HEART FAILURE ..... 11

*Pathophysiology of Acute Heart Failure ..... 11*

*De-Novo Heart Failure versus Acute Decompensated Heart Failure..... 12*

*Epidemiology..... 13*

*Approach ..... 14*

*Electrocardiogram in Heart Failure .....22*

**INTRODUCTION.....32**

**METHODS .....33**

PATIENTS.....33

STATISTICAL ANALYSES.....34

**RESULTS .....35**

DEMOGRAPHICS .....35

ECG CHARACTERISTICS.....36

*Ventricular conduction abnormalities ..... 37*

*Ventricular conduction abnormalities associated with mortality .....39*

**DISCUSSION.....43**

LIMITATIONS .....45

CONCLUSIONS .....46

**ACKNOWLEDGEMENTS .....47**

**FUNDING.....48**

**CONFLICT OF INTEREST.....48**

**REFERENCES.....48**

**FIGURE AND TABLE REFERENCES .....59**