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Title

Propofol Induction is Associated with Changes in Diastolic Function

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Department of Anesthesiology and Pain Medicine

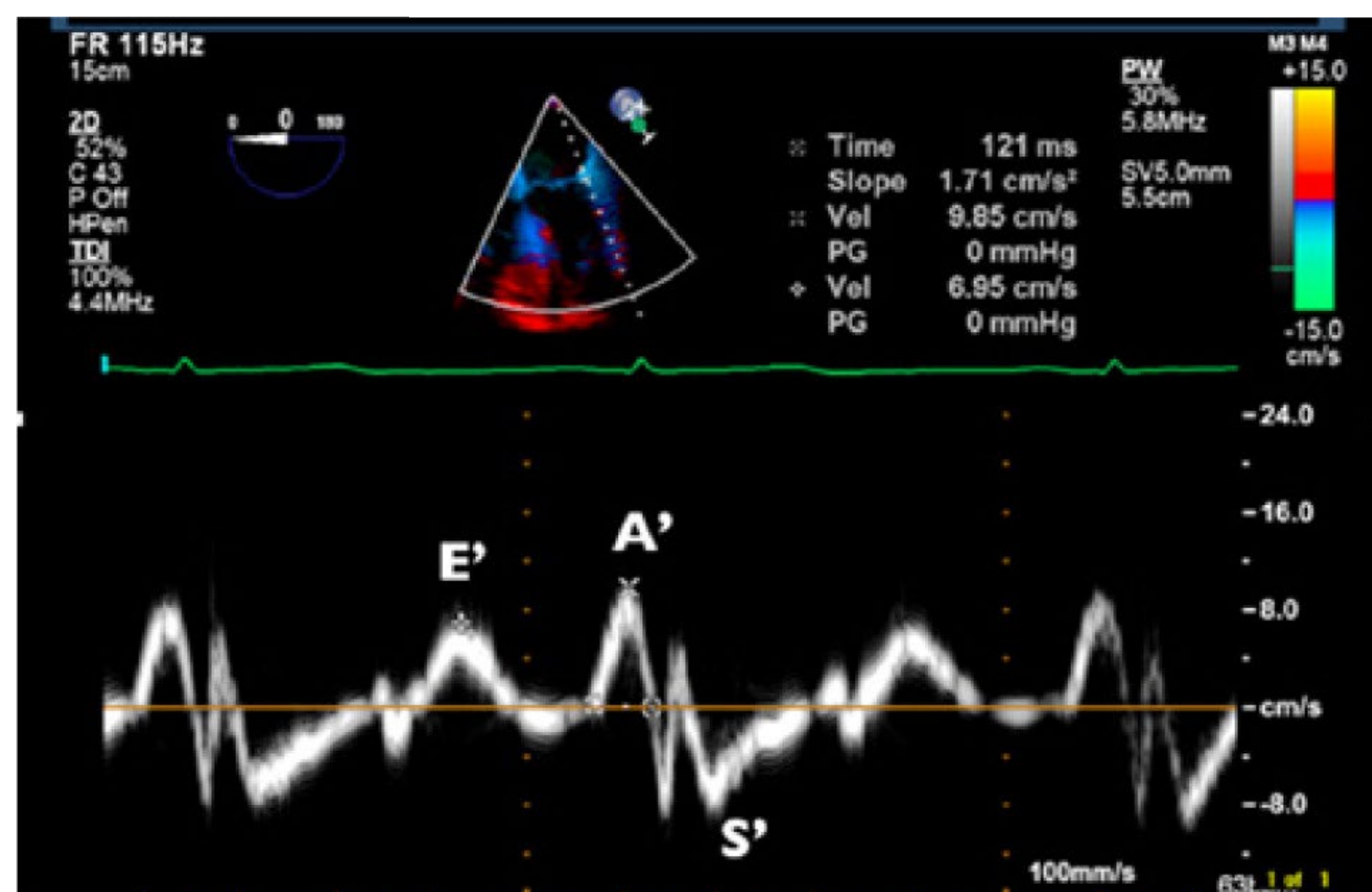
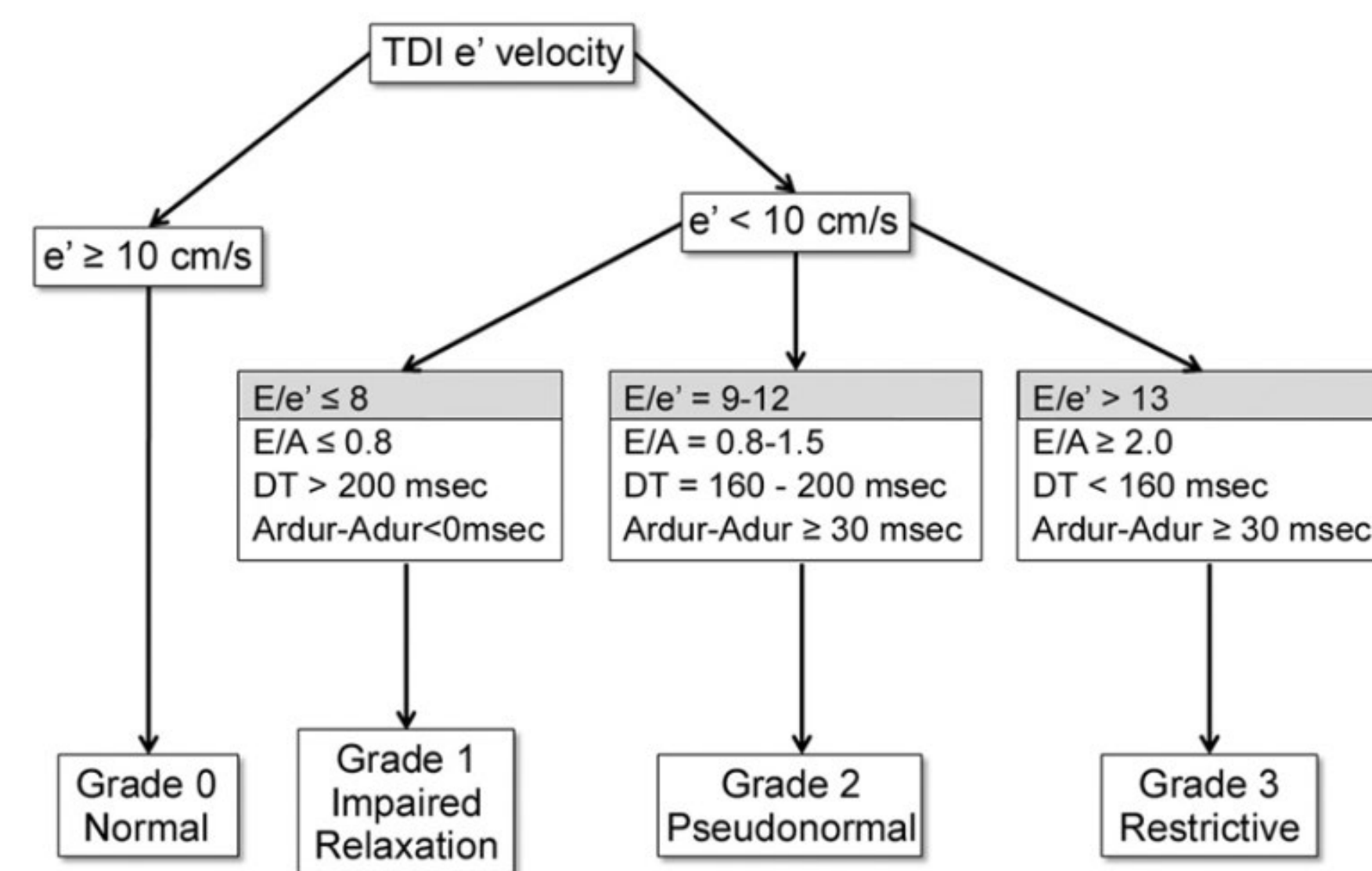
Zachary Hamilton, Shalin Desai, Lynh McCloskey, Neal Fleming MD PhD

Introduction

- Diastolic dysfunction associated with peri- and post-operative complications
- Propofol and cardiovascular depression
- Some studies report that propofol worsens diastolic function, others report improvement
- **Hypothesis:** Diastolic function will be unaffected by propofol administration

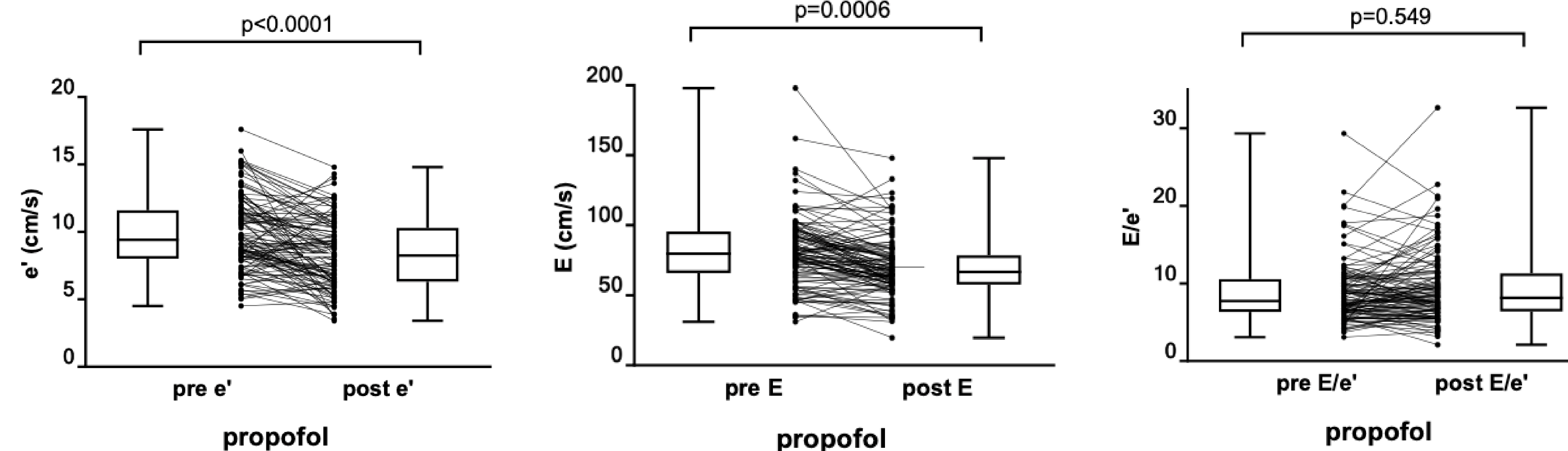
Study Design

- Transthoracic echocardiogram (TTE) to assess left ventricular diastolic function pre- and post-induction
- Measurements
 - Lateral mitral annular tissue doppler velocity (e')
 - Peak early mitral flow velocity (E)
 - Peak late mitral flow velocity (A)
- Based on the TTE measurements, patients categorized into one of four grades of diastolic function



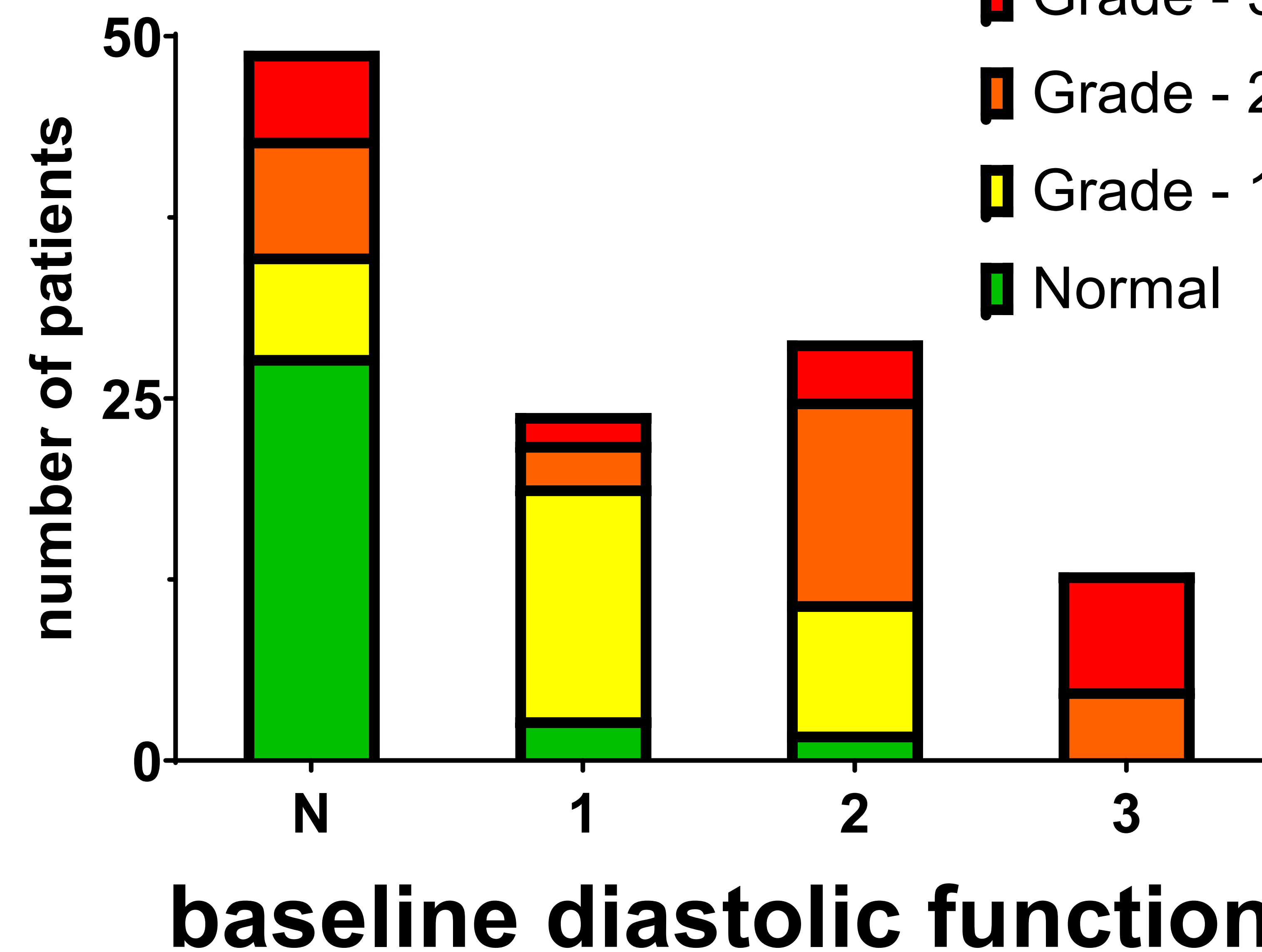
Results

Left ventricular diastolic function *is* affected by propofol administration



post-propofol function

- Grade - 3
- Grade - 2
- Grade - 1
- Normal



Pre-Induction → Post-Induction

- Grade 0: 47 → 32
- Grade 1: 24 → 33
- Grade 2: 29 → 29
- Grade 3: 13 → 19

Summary

- 113 patients included in the study
- Average age 69.5 years
- 30.8% Female, 69.2% Male

Pre-op → post-op diastolic function grades:

- 64 (56.6%) patients had **same** grade
- 29 (25.6%) patients had **worse** grade
- 20 (17.8%) patients had **improved** grade

- **Significant differences in e' and E**
- **No significant difference in E/ e'**

Further Study

- Does the magnitude of the effect of propofol have an impact on postoperative outcomes?
- For how long after induction does propofol affect diastolic function?
- Do results change between demographics?

References

1. Ammar et al., Anaesthesia 2016; 71(11):1308-1316
2. Kato et al., Masui 2004; 53(7):761-6

QR code with a link to our poster for further review →

