



OPERATING TIME

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Introduction

Total Laparoscopic Hysterectomies (TLH) are associated with less pain, greater view of the surgical field, fewer infections and faster recovery times when compared with Total Abdominal Hysterectomies (TAH). However, an important consideration is the longer operation time commonly seen in TLHs¹.

Aims

Our aim was to identify peri-operative variables significantly impacting on the surgical operation time of TLH.

Methods

Patients undergoing TLH performed by the highest output surgeon at the Royal Derby Hospital between 14/08/2008 - 03/10/2020 were identified. Electronic care and operating records were retrospectively reviewed, and data collected on patient BMI, surgical technique and operating times. Univariate analysis was performed, setting significance at $P < 0.05$.

Results

- 590 patients identified
- Mean TLH operating time reduced from 148 to 71 mins (Fig. 1)
- Lower BMI (18.5-24.9) patients had significantly shorter operations than higher BMI (≥ 25.0) patients (Fig. 2)

Results

- The Thunderbeat energy device (Olympus) was associated with quicker TLHs compared with use of the Harmonic scalpel (J&J) (Fig. 3)
- Operations using a 5mm scope port size compared to 10mm took significantly less time (Fig. 4)
- No significant impact on operation time in association with indication for surgery (benign vs malignant); addition of regional anaesthetic; entry technique (Routine vs Palmer's vs Hasson); nor vaginal closure material (Vicryl vs V-Lock).

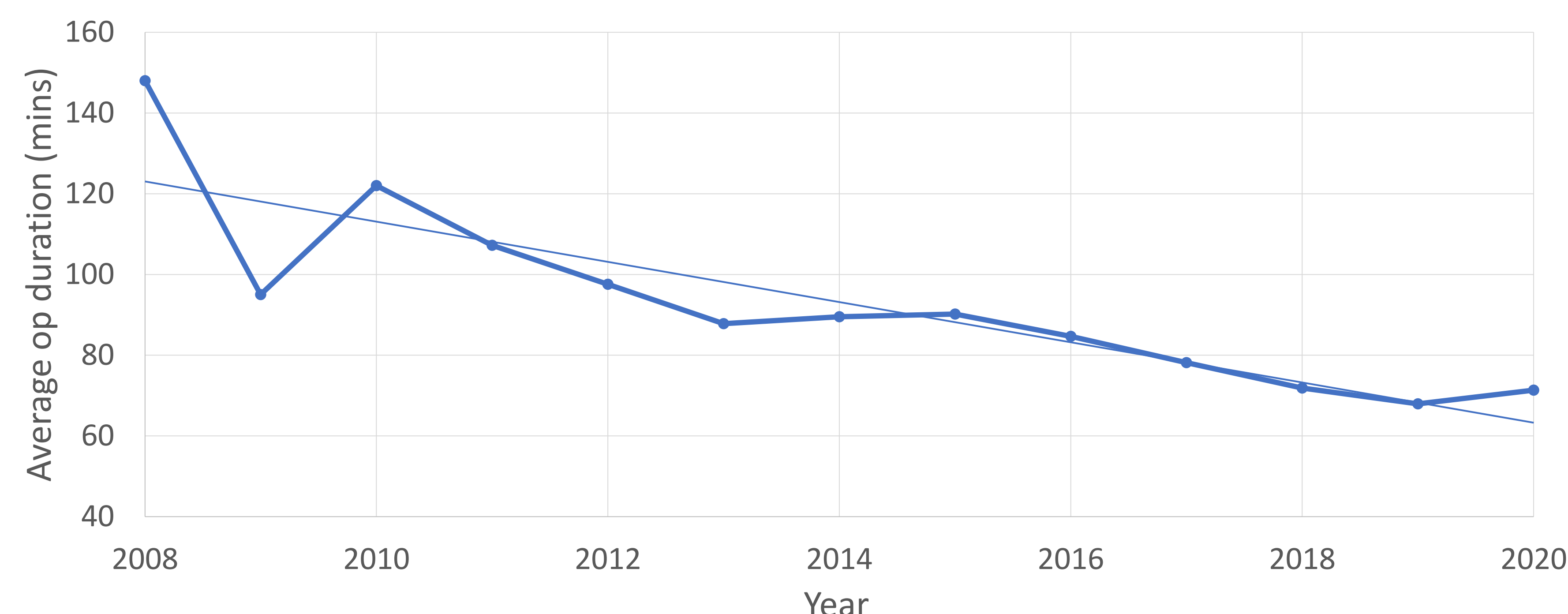


Fig. 1. Average op duration each year from 2008-2020

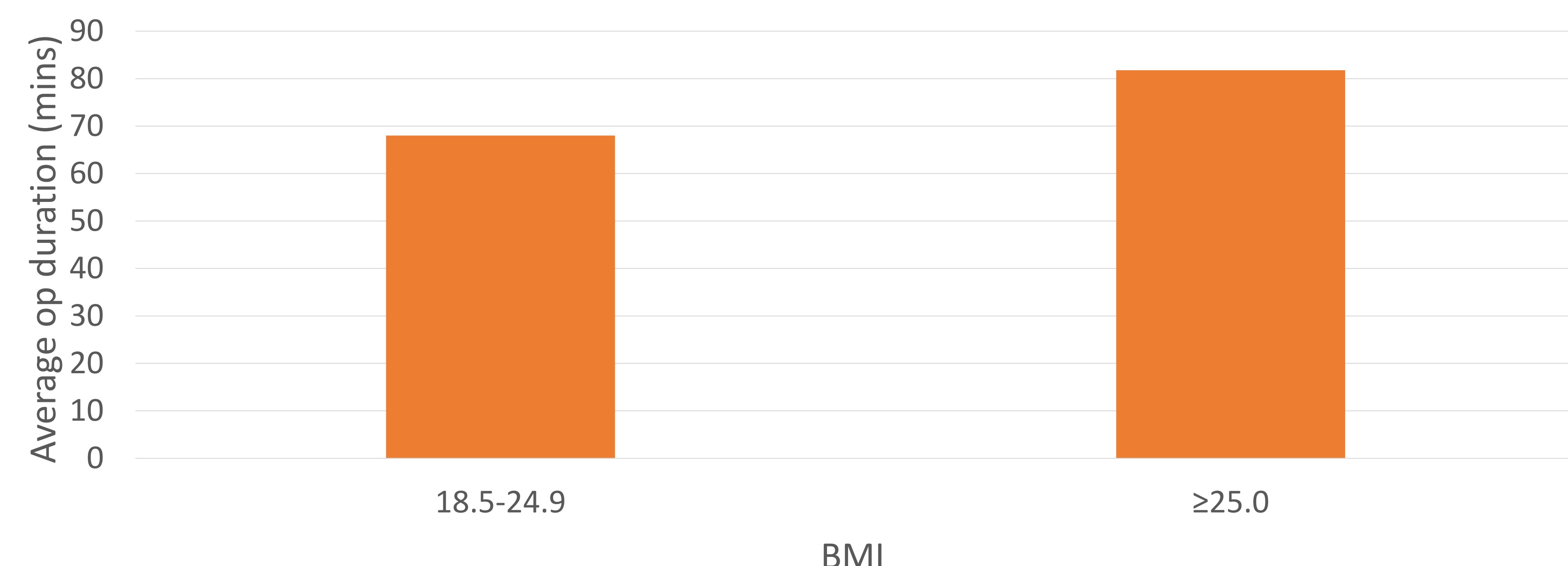


Fig. 2. Average op duration of 18.5-24.9 BMI group vs. ≥ 25.0 BMI group

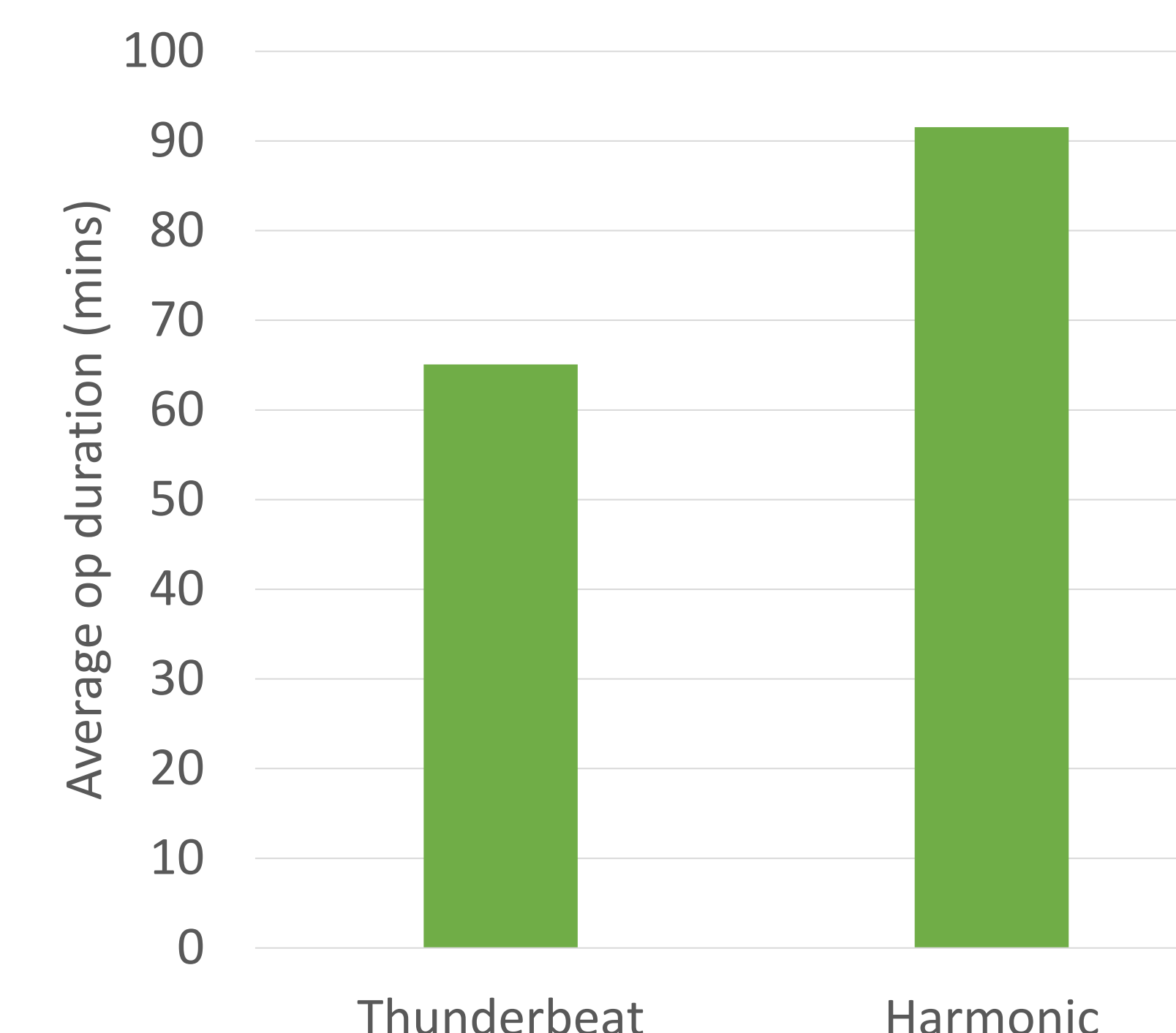


Fig. 3. Average op duration of Thunderbeat vs. Harmonic operations

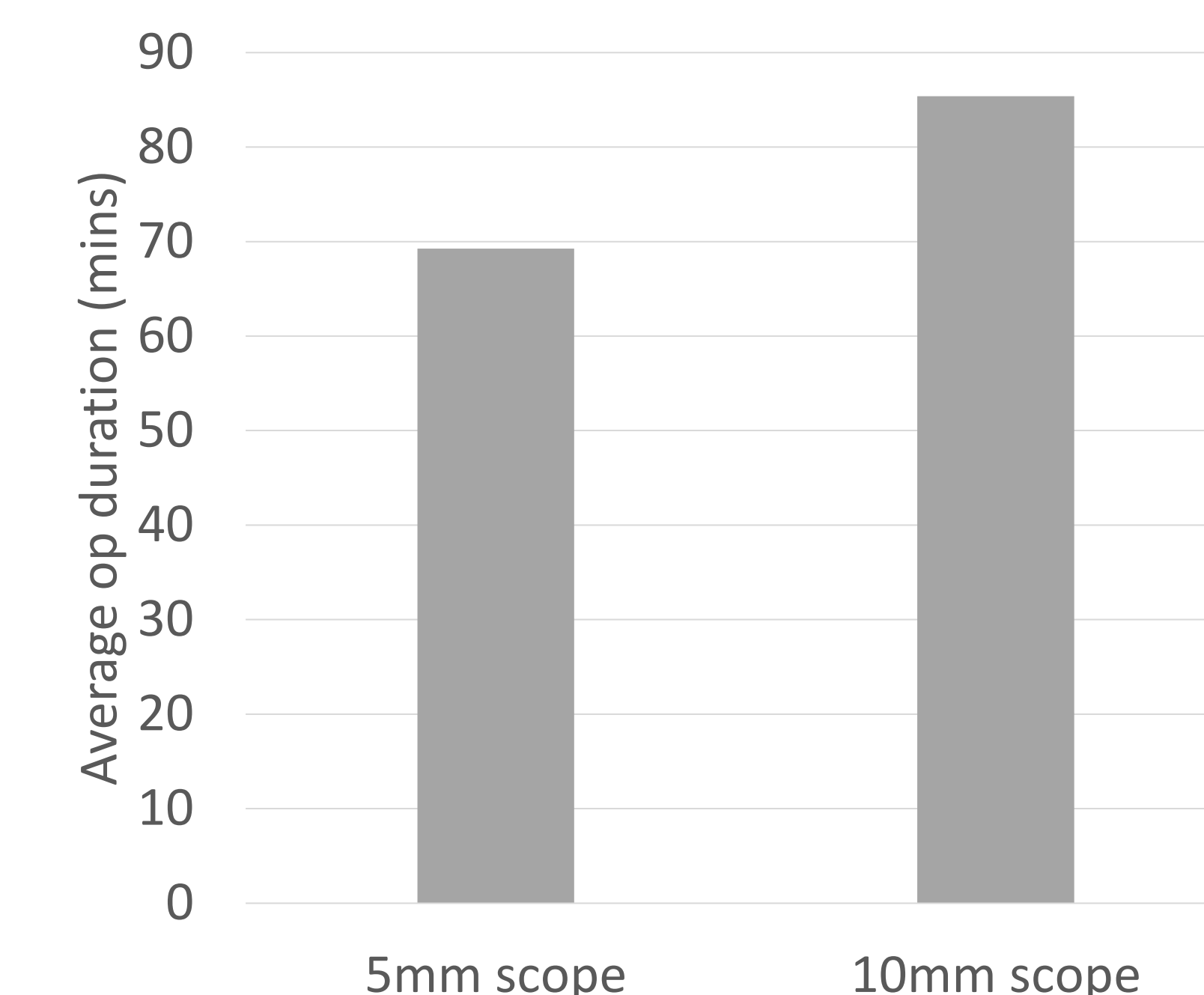


Fig. 4. Average op duration of 5mm scope vs. 10mm scope size operations

Conclusion

The downward trend in operating duration over time reflects the TLH learning-curve. Longer surgery in the context of raised BMI highlights the surgical challenges associated with morbidity – an important consideration in pre-operative planning. Energy device and port size may impact on operating time, however further multi-variate analysis is required to determine the true significance of such – along with surgeon experience – as independent factors in the performance of more efficient TLHs.

References

1. Vaisbuch E, Goldchmit C, Ofer D, Agmon A, Hagay Z. Laparoscopic hysterectomy versus total abdominal hysterectomy: a comparative study. Eur J Obstet Gynecol Reprod Biol. 2006 Jun;126(2):234–8.