

## ASO Author Reflections: Is It Important to Do Exercise Before Surgery for HPB Malignancy?

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### PAST

We previously demonstrated that preoperative poor skeletal muscle mass and poor functional exercise capacity were associated with not only a higher rate of postoperative morbidity and mortality but also worse long-term survival in patients undergoing surgery for HPB malignancies.<sup>1,2</sup> These results clearly indicate the importance of increasing skeletal muscle mass and improving physical fitness before HPB surgeries for malignancies.

### PRESENT

Previous reviews indicated that preoperative physical exercise and nutritional interventions in patients who underwent elective colorectal resection for cancer is feasible, safe, and efficacious.<sup>3–6</sup> However, the impact of preoperative physical exercise on physical fitness, postoperative complications, and hospital stay after highly invasive HPB surgeries for malignancy was unknown. Moreover, the benefit of nutritional intervention combined with physical exercise had not been well-evaluated. Our study demonstrated that our prehabilitation program was associated with improved physical fitness and preservation of nutritional status compared with appropriately matched

patients who did not received this therapy before HPB surgery for malignancy.<sup>7</sup> Although the exact causative mechanism has not been elucidated, the length of postoperative hospital stay was shorter in the prehabilitation group than the no prehabilitation group. Thus, the introduction of prehabilitation has a potential to reduce the total perioperative medical costs in this type of surgery.

### FUTURE

Our study is not a randomized, controlled trial but compared the data of patients before and after the introduction of prehabilitation program using the propensity score matching analysis.<sup>7</sup> Ideally, the exact effects of prehabilitation should be elucidated through a randomized, controlled trial. We are now planning a randomized, controlled trial.

**DISCLOSURES** The author has no conflicts of interest to disclose.

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