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“Association between Postoperative Fall among Older Adults with Cancer”

Background: Falls at home or in the hospital negatively impact patients’ lives, leading to adverse outcomes and impaired quality of life. Older adults with cancer who are frail may be at higher risk for falls in the postoperative period. **Objectives:** We seek to assess the association between preoperative frailty and inpatient postoperative fall among older adults with cancer, and to compare the outcomes of fallers to non-fallers based on frailty. **Methods:** We identified 7,661 patients ≥ 65 years who underwent elective surgery between 2014-2020 and had a hospital stay of ≥ 1 day with available Memorial Sloan Kettering-Frailty Index (MSK-FI) to assess frailty. Univariable logistic regression was used to evaluate the association between frailty and falls. Multivariable logistic regression was used for the composite outcome of readmission and mortality, with predictors frailty, falls, and its interaction, adjusted for age, sex, race, and preoperative albumin. **Results:** Seventy-six patients (1.0%; 95% CI 0.8%, 1.2%) fell, among whom 11% were readmitted and 11% died within 90-days. Falls most often occurred in the patient rooms (57%) and at night (37%). We found an association between higher MSK-FI and increased fall risk (OR 1.40; 95% CI 1.22; 1.59; p-value < 0.001 ; Figure 1). We did not find evidence of a difference in the association between frailty and the composite outcome based on fall status (interaction p-value = 0.13). Omitting the interaction term from the model, we saw an association between higher frailty and worse outcome (OR 1.07; 95% CI 1.02, 1.13; p-value = 0.006) and a non-significant association between falls and worse outcome (OR 1.18; 95% CI 0.59, 2.18; p-value = 0.6; Figure 2). **Conclusion:** Preoperative frailty is associated with inpatient postoperative fall among older adults with cancer. Screening for frailty in the preoperative setting may enable healthcare institutions to implement interventions aimed at reducing inpatient postoperative falls.

Figure 1. Risk of in-patient fall based on frailty as defined by the MSK-FI. Shaded area corresponds to 95% CI.

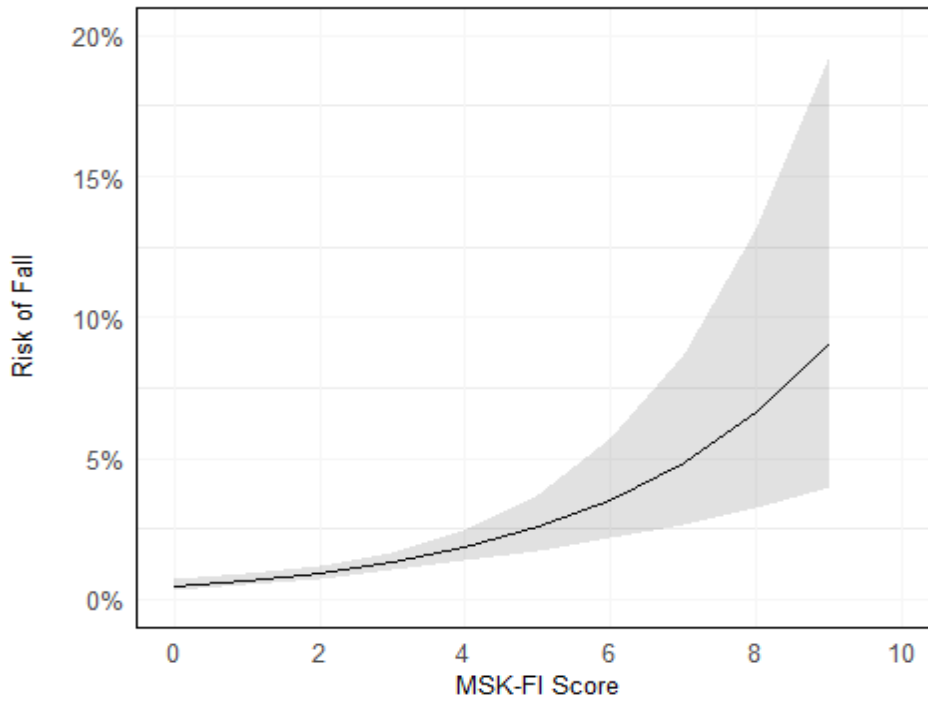


Figure 2. Risk of 30-day readmission or 90-day mortality based on frailty as defined by the MSK-FI and in-patient fall status (red corresponds to fall during the in-patient period and blue corresponds to no fall during the in-patient period; shaded area corresponds to 95% CI).

