Outcomes of Cytoreductive Surgery (CRS) with Hyperthermic Intraperitoneal Chemotherapy (HIPEC) in Patients Older than 70 Years; Survival Benefit at Considerable Morbidity and Mortality: A Reply

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TO THE EDITORS:

We thank Jouvin et al. for their interest in our cytoreductive surgery (CRS)/hyperthermic intraperitoneal chemotherapy (HIPEC) experience in patients older than 70 years.¹

We agree that inclusion of ages younger than 70 years in the definition of elderly makes outcomes of the procedure difficult to interpret. When our cohort included patients younger than 70 years, the mortality dropped to 3.9%.

We also agree that the elderly who will do well with CRS/HIPEC are Eastern Cooperative Oncology Group (ECOG) 0–1, with low-volume disease and no major comorbidities. This is probably why we did not observe mortality in our octogenarians, as we used more selective criteria in that age group. However, ECOG performance status < 3 does not function well as a selection criterion in the elderly (> 70 years). In addition, each comorbidity such as diabetes, chronic obstructive pulmonary disease (COPD), or coronary disease, conditions quite common in this age group, resulted in doubling the morbidity risks

with odds ratio of 2.19 [95% confidence interval (CI) 1.06–4.53, $p = 0.035$].

Our article again demonstrates that increased volume of peritoneal disease is associated with higher morbidity. This morbidity, even though it may not lead to postoperative mortality, has a detrimental effect on overall survival.

We suggest that a 77-year-old patient, ECOG 1, peritoneal cancer index (PCI) 15, with diabetes may not behave the same as a 67-year-old. Therefore, CRS/HIPEC for patients aged 70 years and above (not 65 years and above) should be offered with caution, to select candidates without major comorbidities and with low volume of peritoneal disease.

REFERENCE

1. Votanopoulos KI, Newman NA, Russell G, Ihemelandu C, Shen P, Stewart JH, Levine EA. Outcomes of cytoreductive surgery (CRS) with hyperthermic intraperitoneal chemotherapy (HIPEC) in patients older than 70 years; survival benefit at considerable morbidity and mortality. *Ann Surg Oncol*. 2013;20(11):3497–503. <https://doi.org/10.1245/s10434-013-3053-z>.