Denominator Based Studies Need Full Disclosure of the Origins of Patients Treated

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Dear Sir,

We read with interest the publication by Hall et al. “Maximal-Effort Cytoreductive Surgery for Ovarian Cancer Patients with a High Tumor Burden: Variations in Practice and Impact on Outcome”.¹ This is an excellent attempt to describe the effect of variations in management of patients with advanced ovarian cancer in a cohort with complete denominator data. This approach should be applauded, and we feel that this should be the standard of reporting retrospective reviews in the future. We have however several concerns that we would be grateful if the authors could address.

Although the locations of centres A and B remain undisclosed, from the authors’ affiliations we assume that centre A is Imperial College London, a European Society of Gynaecological Oncology (ESGO)-accredited centre of excellence. We would therefore expect this centre to receive more quaternary referrals for treatment, and this would perhaps explain the significant difference in age between the two centres as well as, in part, the higher proportion of patients operated on. This is eluded to in the discussion, but descriptors are not available in the results. This is vital since the addition of patients from outside the local catchment area will elevate the cytoreduction rate, the primary surgery rate and the overall survival figures. The authors should explicitly state how many quaternary referrals are included and ideally remove them from the analysis to enable the true impact of maximum-effort surgery in an unselected patient group to be assessed. If centres that do not receive quaternary referrals use this benchmarking data and try to deliver an 87% operated rate,

with 77% receiving upfront surgery and 85% achieving complete macroscopic resection, we suspect the 28-day mortality would far exceed 1.8%.

Whilst it is claimed there is no difference in stage between the two centres, a Chi squared test on the presented data shows a highly significant difference with centre A having more stage 3A and 4 disease than centre B. This would be expected in a centre such as centre A with a more aggressive surgical approach.

Most significantly, however, concerns lie with the choice of statistical tests used to describe the overall survival from these two centres, and we would be grateful if the authors could provide the median (rather than the mean) survival figures for the total cohort and surgical cohort for the two centres. The mean is not the standard descriptive statistic for data that are not normally distributed (such as survival), as it is prone to be significantly affected by outliers (i.e. long-term survivors) and indeed is not the test used by the authors in previous publications. Additionally, a Kaplan–Meier graph of the individual centres is not available, again making it difficult to see where the median survival may lie.

Finally, could the authors please explain why, according to Table 1, only nine patients received palliative treatment and yet the Kaplan–Meier curve presented in Fig. 2a clearly demonstrates more than nine events occurring.

REFERENCE

1. Hall M, Savvatis K, Nixon K, et al., Maximal-effort cytoreductive surgery for ovarian cancer patients with a high tumor burden: variations in practice and impact on outcome. *Ann Surg Oncol.* (2019) <https://doi.org/10.1245/s10434-019-07516-3>.