

Defining a Successful Esophagectomy

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We read with interest the report by Teoh et al¹ describing the equivalence of surgery or radical chemoradiation on survival, health-related quality of life (HRQL), and functional performance at 2 years follow-up in a randomized trial of squamous cell cancer of the esophagus, and the accompanying editorial by Orringer² on how to define a “successful” esophagectomy. We have previously reported broadly similar findings on the impact of these approaches on HRQL in the first 12 months after chemoradiation alone, multimodal therapy, and surgery only.^{3,4}

First, the assessment of swallowing within quality of life and functional performance is of interest, and we are struck by the high requirement for endoscopic therapy for swallowing dysfunction in both groups: 47.7% in the surgery group and 35.1% in the chemoradiation group. We have studied 132 patients (91 adenocarcinoma and 41 squamous cell cancer) at a median length of follow-up of 49 months (interquartile range: 28.5–104 months), all of whom are beyond 12 months postesophagectomy. In this study, in a Western series, swallowing dysfunction after esophagectomy was common ($n = 39$, 30.0%) and correlated with global HRQL (Spearman [ρ] = 0.508, $P < 0.01$, 2-tailed). However, in marked contrast to this trial, just 1 patient required an endoscopic dilatation to treat a benign stricture beyond 6 months of follow-up. Swallowing dysfunction may also represent alterations in vagal function and esophageal physiology, and it would be helpful to know whether the requirements for endoscopic intervention after chemoradiotherapy or surgery in this trial reflect true strictures or this type of dysfunction.

Second, we would suggest that there is a lack of concordance between the EORTC-C30 global health scores and the true outcome for the patients. In the trial, at 2 years of follow-up, global HRQL scores objectively were not significantly different from pretreatment values and demonstrated no difference between the chemoradiation and surgery arms. This apparent restoration of global health was at a time when physical functioning was markedly reduced for both the chemoradiation group ($P = 0.05$) and the surgery group ($P = 0.07$), where fatigue scores are increased by a factor of 2 to 3 in both groups, where dyspnoea was increased by approximately threefold in both groups, and coughing ($P = 0.04$) by threefold in the chemoradiation group.

An acceptable quality of life is what the patient reports as acceptable; however, standard HRQL indices do not ask patients to rate their quality of life compared to any standard. While we measure global HRQL on a simple scale, we have yet to define a cut-off value for a “good” versus “bad” HRQL, not to mention an

“acceptable” quality of life in context of alternative treatment methodologies. It is known that patients receiving cancer treatment are more willing to accept larger negative changes in HRQL scores without judging this change to be unacceptable.⁵ Moreover, although an increase in a symptom score using the EORTC questionnaire might indicate the presence of the symptom, it does not quantify the severity of the problem, nor explicitly link its impact to global HRQL. The Likert scale used for reporting symptoms in the EORTC questionnaire [1. “not at all,” 2. “a little,” 3. “quite a bit,” and 4. “very much”] is based on symptom frequency and does not imply that this symptom impacts on overall HRQL.⁶ It may be reasonable to infer in the study by Teoh et al ¹ that the swallowing difficulties and other symptoms are not judged by many patients as significantly impacting their global HRQL.

Although HRQL scores may be a useful tool for comparisons between treatment groups, and show equivalence in this clinical trial, the information they provide regarding true HRQL after esophagectomy or chemoradiation is unclear. Improved HRQL and functional tools are needed to better define the “successful” esophagectomy or outcome from chemoradiation. The minimally important difference is the smallest change in an HRQL score that a patient subjectively deems to be important to them. Some have suggested that the presentation of HRQL results as the proportion of patients who experience greater than or less than the minimally important difference score may aid in the translation of patient-reported outcomes from clinical trials to their use as a tool, which may aid in the evaluation of treatment approaches and clinical decision making.⁷ We know from our series ⁸ that most patients have long-term sequelae from surgery and chemoradiation and have significant impairment in HRQL compared with population controls and other disease-free cancer cohorts.

The trial by Teoh et al shows equivalence at 2 years between chemoradiation and surgery. It would be wrong in our view to interpret the global health status at this time as recovery of a normal quality of life. Moreover, we disagree with Dr Orringer that the article “establishes a standard for reporting outcomes after esophagectomy”—new tools are required.

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