**Supplementary Text**

**MATERIALS AND METHODS**

***Esophagectomy and lymphadenectomy***

 The thoracic procedure was performed using conventional right thoracotomy or minimally invasive esophagectomy (MIE). The abdominal procedure was performed using conventional open laparotomy or hand-assisted laparotomy (HAL). Radical lymphadenectomy of the mediastinal and abdominal regions was performed for all patients, except those who underwent salvage surgery after definitive radiotherapy. Mediastinal lymphadenectomy for patients who underwent salvage surgery after irradiation was performed only for lymph nodes diagnosed as viable on preoperative positron emission tomography (PET). For one patient, abdominal lymphadenectomy was performed in the same manner as that for non-salvage surgery. Bilateral cervical lymphadenectomy was performed only for patients with suspected cervical lymph node metastasis according to a preoperative examination, such as computed tomography or PET.

***Perioperative management***

 Methylprednisolone (250 mg) was administered at the beginning of surgery. As a preventive antibiotic, 1 g of cefazolin was administered at the beginning of surgery and every 3 hours during surgery; on postoperative day 1, 2 g was administered. Extubation was performed in the operating room immediately after surgery. Physical rehabilitation was started on postoperative day 1, if possible. Enteral nutrition was started on postoperative day 1 and was gradually increased if it did not cause gastrointestinal symptoms, such as diarrhea and chylothorax. Full enteral nutrition was usually started on postoperative day 6. An upper gastrointestinal contrast examination was conducted approximately 7 days postoperatively, and the anastomotic site and swallowing function were evaluated. Eating and drinking were forbidden before the contrast examination was performed. If AL was not confirmed by the contrast examination, then meals comprising oatmeal were started the next day. These protocols were unchanged for the entire study period (Gr.N and Gr.S followed the same perioperative protocols).