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| --- | --- | --- | --- |
| **Supplementary table 1.** Comparisons of ESD cases between experts and trainees | | | |
|  | Experts  (n = 244) | Trainees  (n = 59) | *P*-value |
| Sex, n (%) |  |  | 0.392 |
| Male | 213 (87.3) | 49 (83.1) |  |
| Female | 31 (12.7) | 10 (24.4) |  |
| Age |  |  | 0.160 |
| ≤ 75 years | 187 (76.6) | 40 (67.8) |  |
| >75 years | 57 (23.4) | 19 (32.2) |  |
| Tumor location, n (%) |  |  | 0.862 |
| Cervical/upper thoracic | 23 (9.4) | 6 (10.2) |  |
| Middle thoracic/lower thoracic/abdominal | 221 (90.6) | 53 (89.8) |  |
| Tumor localization, n (%) |  |  | 0.106 |
| Anterior/posterior /right wall | 204 (83.6) | 44 (74.6) |  |
| Left wall | 40 (16.4) | 15 (25.4) |  |
| Macroscopic type, n (%) |  |  | 0.549 |
| Elevated/flat | 89 (36.5) | 24 (40.7) |  |
| Depressed | 155 (63.5) | 35 (59.3) |  |
| Longitudinal tumor size, n (%) |  |  | 0.619 |
| ≤ 30 mm | 187 (76.6) | 47 (79.7) |  |
| > 30 mm | 57 (23.4) | 12 (20.3) |  |
| Circumferential extent of the tumor, n (%) |  |  | 0.252 |
| ≤ 1/2 | 150 (61.5) | 41 (69.5) |  |
| > 1/2 | 94 (38.5) | 18 (30.5) |  |
| Preoperative diagnosis of histological type, n (%) |  |  | 0.522 |
| Squamous cell carcinoma | 221 (90.6) | 55 (93.2) |  |
| Adenocarcinoma | 23 (9.4) | 4 (6.8) |  |
| Preoperative diagnosis of invasion depth, n (%) |  |  | 0.499 |
| T1a | 211 (86.5) | 49 (83.1) |  |
| T1b | 33 (13.5) | 10 (16.9) |  |
| Previous radiotherapy for esophageal cancer, n (%) |  |  | 0.438 |
| Absent | 223 (91.4) | 52 (88.1) |  |
| Present | 21 (8.6) | 7 (11.9) |  |
| Metachronous lesion close to post ESD scar, n (%) |  |  | 0.525 |
| Absent | 232 (95.1) | 55 (93.2) |  |
| Present | 12 (4.9) | 4 (6.8) |  |
| Use of a clip-and-thread traction method |  |  | 0.084 |
| Absent | 212 (86.9) | 46 (78.0) |  |
| Present | 32 (13.1) | 13 (22.0) |  |
| ESD outcomes |  |  |  |
| Difficult cases (procedure time > 120 min) | 42 (17.2) | 9 (15.3) | 0.718 |
| Incomplete resection | 6 (2.5) | 0 (0.0) | 0.601 |
| Esophageal perforation | 2 (0.8) | 2 (3.4) | 0.172 |
| *ESD, endoscopic submucosal dissection*  *T1a, tumor confined to the muscularis mucosa; T1b, tumor infiltrating into the submucosa* | | | |