**SUPPLEMENTARY APPENDIX**

Supplementary Table S1**.** PD-L1 expression (CPS cutoff of 10) by clinicopathologic characteristics

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | |  | **PD-L1 Expression** | | |  |
| **Characteristic** | | **Total** | **CPS ≥10** | | **CPS <10** | ***p*** |
|  | | ***N*** | ***n* (%)** | ***n* (%)** | | **(chi-square)** |
| All patients | 574 | | 105 (18.3) | 469 (81.7) | |  |
| **Age, years** | | | | | | |
| <65 | 359 | | 60 (16.7) | 299 (83.3) | | 0.206 |
| ≥65 | 215 | | 45 (20.9) | 170 (79.1) | |
| **Sex** | | | | | | |
| Male | 404 | | 79 (19.6) | 325 (80.4) | | 0.228 |
| Female | 170 | | 26 (15.3) | 144 (84.7) | |
| **Geographic location** | | | | | | |
| United States | 245 | | 41 (16.7) | 204 (83.3) | | 0.405 |
| South Korea | 329 | | 64 (19.5) | 265 (80.5) | |
| **Tumor site**a | | | | | | |
| Gastric (primary) | 419 | | 87 (20.8) | 332 (79.2) | | 0.001 |
| GEJ (primary)b | 133 | | 11 (8.3) | 122 (91.7) | |
| Othersc | 22 | | 7 (31.8) | 15 (68.2) | |
| **Tumor grade**d | | | | | | |
| Well to moderately differentiated | 193 | | 35 (18.1) | 158 (81.9) | | 0.933 |
| Poorly differentiated/otherse | 380 | | 70 (18.4) | 310 (81.6) | |
| **Lauren classification**f | | | | | | |
| Intestinal | 92 | | 28 (30.4) | 64 (69.6) | | <0.001 |
| Diffuse | 102 | | 10 (9.8) | 92 (90.2) | |
| **Tissue type** | | | | | | |
| Surgical resection | 153 | | 35 (22.9) | 118 (77.1) | | 0.087 |
| Biopsy | 421 | | 70 (16.6) | 351 (83.4) | |
| **Clinical stage (*AJCC Cancer Staging Manual*, 7th edition)**g | | | | | | |
| I-III | 290 | | 48 (16.6) | 242 (83.4) | | 0.422 |
| IV | 277 | | 53 (19.1) | 224 (80.9) | |
| **HER2 status** | | | | | | |
| Negative | 375 | | 73 (19.5) | 302 (80.5) | | 0.056 |
| Positive | 49 | | 13 (26.5) | 36 (73.5) | |
| Undetermined/unknown | 150 | | 19 (12.7) | 131 (87.3) | |

aData collected from tumor site; may not be primary tumor site.

bGEJ (primary) included esophagus–adenocarcinoma of esophagogastric junction II (AEG II).

cOthers include lymph node, metastatic site, gastric and lymph node, and gastric and metastatic site.

dPatients with unknown tumor grade (n = 1) were excluded from the analysis.

eOthers include adenocarcinoma moderately to poorly differentiated, adenocarcinoma poorly differentiated with signet ring cell carcinoma, carcinoma with lymphoid stroma, mixed mucinous carcinoma (70%), and tubular adenocarcinoma, poorly differentiated (30%).

f380 subjects with unknown, missing and mixed Lauren classification are excluded from the analysis.

g7patients with missing clinical stage were excluded from the analysis.

AJCC, American Joint Committee on Cancer; CPS, combined positive score; GEJ, gastroesophageal junction; HER2, human epidermal growth factor receptor 2; PD-L1, programmed death ligand 1.

Supplementary Table S2.PD-L1 expression (CPS <1 vs 1 to <10 vs ≥10) by clinicopathologic characteristics

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Characteristic** | **Total *N***  ***N*** | **PD-L1 Expression** | | | | | | | | ***p*  (chi-square)** |
| **CPS <1** | | | **CPS 1 to <10** | | | **CPS ≥10** | |
| ***n* (%)** | | | ***n* (%)** | | | ***n* (%)** | |
| All patients | 574 | 187 (32.6) | | | 282 (49.1) | | | 105 (18.3) | |  |
| **Age, years** | | |  |  | |  |  | |  | |
| <65 | 359 | 130 (36.2) | | | 169 (47.1) | | | 60 (16.7) | | 0.049 |
| ≥65 | 215 | 57 (26.5) | | | 113 (52.6) | | | 45 (20.9) | |
| **Sex** | | |  |  | |  |  | |  | |
| Male | 404 | 129 (31.9) | | | 196 (48.5) | | | 79 (19.6) | | 0.480 |
| Female | 170 | 58 (34.1) | | | 86 (50.6) | | | 26 (15.3) | |
| **Geographic location** | | |  |  | |  |  | |  | |
| United States | 245 | 84 (34.3) | | | 120 (49.0) | | | 41 (16.7) | | 0.621 |
| South Korea | 329 | 103 (31.3) | | | 162 (49.2) | | | 64 (19.5) | |
| **Tumor site**a | | |  |  | |  |  | |  | |
| Gastric (primary) | 419 | 131 (31.3) | | | 201 (48.0) | | | 87 (20.8) | | 0.006 |
| GEJ (primary)b | 133 | 48 (36.1) | | | 74 (55.6) | | | 11 (8.3) | |
| Othersc | 22 | 8 (36.4) | | | 7 (31.8) | | | 7 (31.8) | |
| **Tumor grade**d | | |  |  | |  |  | |  | |
| Well to moderately differentiated | 193 | 57 (29.5) | | | 101 (52.3) | | | 35 (18.1) | | 0.471 |
| Poorly differentiated/otherse | 380 | 130 (34.2) | | | 180 (47.4) | | | 70 (18.4) | |
| **Lauren classification**f | | |  |  | |  |  | |  | |
| Intestinal | 92 | 25 (27.2) | | | 39 (42.4) | | | 28 (30.4) | | 0.001 |
| Diffuse | 102 | 41 (40.2) | | | 51 (50.0) | | | 10 (9.8) | |
| **Tissue type** | | |  |  | |  |  | |  | |
| Surgical resection | 153 | 51 (33.3) | | | 67 (43.8) | | | 35 (22.9) | | 0.162 |
| Biopsy | 421 | 136 (32.3) | | | 215 (51.1) | | | 70 (16.6) | |
| **Clinical stage (*AJCC Cancer Staging Manual*, 7th edition)**g | | |  |  | |  |  | |  | |
| I-III | 290 | 105 (36.2) | | | 137 (47.2) | | | 48 (16.6) | | 0.173 |
| IV | 277 | 80 (28.9) | | | 144 (52.0) | | | 53 (19.1) | |
| **HER2 status** | | |  |  | |  |  | |  | |
| Negative | 375 | 119 (31.7) | | | 183 (48.8) | | | 73 (19.5) | | 0.145 |
| Positive | 49 | 12 (24.5) | | | 24 (49.0) | | | 13 (26.5) | |
| Undetermined/unknown | 150 | 56 (37.3) | | | 75 (50.0) | | | 19 (12.7) | |

aData collected from tumor site; may not be primary tumor site.

bGEJ (primary) included esophagus–adenocarcinoma of esophagogastric junction II (AEG II).

cOthers include lymph node, metastatic site, gastric and lymph node, and gastric and metastatic site.

dPatients with unknown tumor grade (*n* = 1) were excluded from the analysis.

eOthers include adenocarcinoma moderately to poorly differentiated, adenocarcinoma poorly differentiated with signet ring cell carcinoma, carcinoma with lymphoid stroma, mixed mucinous carcinoma (70%), and tubular adenocarcinoma, poorly differentiated (30%).

f380 subjects with unknown, missing, and mixed Lauren classification are excluded from the analysis.

g7patients with missing clinical stage were excluded from the analysis.

AJCC, American Joint Committee on Cancer; CPS, combined positive score; GEJ, gastroesophageal junction; HER2, human epidermal growth factor receptor 2; PD-L1, programmed death ligand 1.

Supplementary Table S3.PD-L1 expression (CPS cutoff of 5) by clinicopathologic characteristics

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | |  | **PD-L1 Expression** | |  |
| **Characteristic** | | **Total** | **CPS ≥5** | **CPS <5** | ***p*** |
|  | | ***N*** | ***n* (%)** | ***n* (%)** | **(chi-square)** |
| All patients | 574 | | 183 (31.9) | 391 (68.1) |  |
| **Age, years** | | | | | |
| <65 | 359 | | 105(29.2) | 254 (70.8) | 0.080 |
| ≥65 | 215 | | 78 (36.3) | 137 (63.7) |
| **Sex** | | | | | |
| Male | 404 | | 136 (33.7) | 268 (66.3) | 0.158 |
| Female | 170 | | 47 (27.6) | 123 (72.4) |
| **Geographic location** | | | | | |
| United States | 245 | | 70 (28.6) | 175 (71.4) | 0.142 |
| South Korea | 329 | | 113 (34.3) | 216 (65.7) |
| **Tumor site**a | | | | | |
| Gastric (primary) | 419 | | 146 (34.8) | 273 (65.2) | 0.017 |
| GEJ (primary)b | 133 | | 29 (21.8) | 104 (78.2) |
| Othersc | 22 | | 8 (36.4) | 14 (63.6) |
| **Tumor grade**d | | | | | |
| Well to moderately differentiated | 193 | | 65 (33.7) | 128 (66.3) | 0.524 |
| Poorly differentiated/otherse | 380 | | 118 (31.1) | 262 (68.9) |
| **Lauren classification**f | | | | | |
| Intestinal | 92 | | 43 (46.7) | 49 (53.3) | <0.001 |
| Diffuse | 102 | | 21 (20.6) | 81 (79.4) |
| **Tissue type** | | | | | |
| Surgical resection | 153 | | 53 (34.6) | 100 (65.4) | 0.393 |
| Biopsy | 421 | | 130 (30.9) | 291 (69.1) |
| **Clinical stage (*AJCC Cancer Staging Manual*, 7th edition)**g | | | | | |
| I-III | 290 | | 82 (28.3) | 208 (71.7) | 0.084 |
| IV | 277 | | 97 (35.0) | 180 (65.0) |
| **HER2 status** | | | | | |
| Negative | 375 | | 125 (33.3) | 250 (66.7) | 0.035 |
| Positive | 49 | | 21 (42.9) | 28 (57.1) |
| Undetermined/unknown | 150 | | 37 (24.7) | 113 (75.3) |

|  |
| --- |
| aData collected from tumor site; may not be primary tumor site. |
| bGEJ (primary) included esophagus–adenocarcinoma of esophagogastric junction II (AEG II). |
| cOthers include lymph node, metastatic site, gastric and lymph node, and gastric and metastatic site. |
| dPatients with unknown tumor grade (n = 1) were excluded from the analysis.  eOthers include adenocarcinoma moderately to poorly differentiated, adenocarcinoma poorly differentiated with signet ring cell carcinoma, carcinoma with lymphoid stroma, mixed mucinous carcinoma (70%), and tubular adenocarcinoma, poorly differentiated (30%).  f380 subjects with unknown, missing and mixed Lauren classification are excluded from the analysis.  g7patients with missing clinical stage were excluded from the analysis.  AJCC, American Joint Committee on Cancer; CPS, combined positive score; GEJ, gastroesophageal junction; HER2, human epidermal growth factor receptor 2; PD-L1, programmed death ligand 1. |