**Supplementary Tables**

**Supplementary Table SI. Kaplan–Meier analysis of disease-free survival (DFS) according to *DEC1* mRNA expression.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **DFS** | **Univariate** | | | **Multivariate** | | |
| **Variable** | **HR** | **95% CI** | **P** | **HR** | **95% CI** | **P** |
| Age (≥65/<65 years) | 1.028 | 0.514–2.058 | 0.937 |  |  |  |
| Sex (male/female) | 1.619 | 0.781–3·360 | 0.195 |  |  |  |
| Location (right/left) | 1.289 | 0.596–2·785 | 0.519 |  |  |  |
| Size (≥50/50<) | 1.012 | 0.491–2·084 | 0.975 |  |  |  |
| Preoperative CEA (≥5/5<) | 1.727 | 0.851–3·504 | 0.130 |  |  |  |
| Degree of differentiation (others/tub) | 1.571 | 0.173–3·001 | 0.652 |  |  |  |
| Depth of tumor invasion (T3, T4/T1, T2) | 1.375 | 0.328–5·757 | 0.663 |  |  |  |
| Lymph node metastasis (present/absent) | ９377 | 2.851–30.840 | <0.001 | 6.680 | 1.954–22.833 | 0·003 |
| Venous invasion (present/absent) | 2.128 | 0.648–6.990 | 0.213 |  |  |  |
| Lymphatic vessel invasion (present/absent) | 4.163 | 1.712–10.123 | 0.002 | 2.416 | 0.963–6.058 | 0.060 |
| Tumor DEC1/ GAPDH (high/low) | 1.846 | 0.911–3.740 | 0.089 |  |  |  |

CEA, carcinoembryonic antigen; CI, confidence interval.

**Supplementary Table SII. Kaplan–Meier analysis of overall survival (OS) according to *DEC1* mRNA expression.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **OS** | **Univariate** | | | **Multivariate** | | |
| **Variable** | **HR** | **95% CI** | **P** | **HR** | **95% CI** | **P** |
| Age (≥65/<65 years) | 1.622 | 0.763–3·446 | 0.209 |  |  |  |
| Sex (male/female) | 0.957 | 0.460–1.989 | 0.906 |  |  |  |
| Location (right/left) | 0.783 | 0.361–1.696 | 0.535 |  |  |  |
| Size （≥50/50<） | 0.877 | 0.405–1.897 | 0.739 |  |  |  |
| Preoperative CEA (≥5/5<) | 2.322 | 1.026–5.259 | 0.043 | 1.549 | 0.665－3.610 | 0.311 |
| Degree of differentiation (others/tub) | 0.663 | 0.157–2.794 | 0.576 |  |  |  |
| Depth of tumor invasion (T3, T4/T1, T2) | 2.529 | 0.343–18.630 | 0.362 |  |  |  |
| Lymph node metastasis (present/absent) | 4.447 | 1.547–12.789 | 0.006 | 4.307 | 1.252－14.809 | 0.021 |
| Venous invasion (present/absent) | 6.101 | 0.830–44.856 | 0.076 |  |  |  |
| Lymphatic vessel invasion (present/absent) | 1.605 | 0.745–3.457 | 0.227 |  |  |  |
| Tumor DEC1/ GAPDH (high/low) | 2.368 | 1.078–5.202 | 0.032 | 1.576 | 0.686–3.621 | 0.284 |

CEA, carcinoembryonic antigen; CI, confidence interval; HR, hazard ratio.

**Supplementary Table SIII. Kaplan–Meier analysis of disease-free survival (DFS) according to DEC1 protein expression.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **DFS** | **Univariate** | | | **Multivariate** | | |
| **Variable** | **HR** | **95% CI** | **P** | **HR** | **95% CI** | **P** |
| Age (≥65/<65 years) | 1.071 | 0.522–2.195 | 0.852 |  |  |  |
| Sex (male/female) | 1.718 | 0.804–3.672 | 0.162 |  |  |  |
| Location (right/left) | 0.837 | 0.383–1.828 | 0.655 |  |  |  |
| Size （≥50/50<） | 1.083 | 0.507–2.313 | 0.837 |  |  |  |
| Preoperative CEA (≥5/5<) | 2.002 | 0.956–4.193 | 0.066 |  |  |  |
| Degree of differentiation (others/tub) | 2.189 | 0.521–9.202 | 0.285 |  |  |  |
| Depth of tumor invasion (T3, T4/T1, T2) | 1.183 | 0.282–4.967 | 0.819 |  |  |  |
| Lymph node metastasis (present/absent) | 11.778 | 2.802–49.506 | <0.001 | 8.934 | 2.072–38.520 | 0.003 |
| Venous invasion (present/absent) | 1.985 | 0.602–6.546 | 0.260 |  |  |  |
| Lymphatic vessel invasion (present/absent) | 3.913 | 1.598–9.584 | 0.003 | 2.332 | 0.937–5.806 | 0.069 |
| Tumor DEC1/ GAPDH (high/low) | 1.626 | 0.793–3.335 | 0.184 |  |  |  |

CEA, carcinoembryonic antigen; CI, confidence interval; HR, hazard ratio.

**Supplementary Table SIV.**

|  |  |  |  |
| --- | --- | --- | --- |
| **DEC1 expression** | | **Protein** | |
| **Low** | **High** |
| **mRNA** | **Low** | **54** | **13** |
| **High** | **11** | **49** |

**Supplementary Table SV. Tumor volume in a subcutaneous xenograft model.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **day0** |  |  |  |  | **(Unit, mm3)** |
| **sh #cont** | **550** | **108** | **256** | **171.5** | **75** | **48** |
| **sh #DEC1** | **40** | **22.5** | **40** | **13.5** | **22.5** | **40** |
| **sh #DEC1\_OE** | **6** | **22.5** | **18** | **18** | **18** | **18** |
|  |  |  |  |  |  |  |
|  | **day3** |  |  |  |  |  |
|  | **600** | **126** | **500** | **171.5** | **108** | **75** |
|  | **40** | **22.5** | **40** | **13.5** | **22.5** | **40** |
|  | **6** | **22.5** | **22.5** | **18** | **18** | **18** |
|  |  |  |  |  |  |  |
|  | **day6** |  |  |  |  |  |
|  | **650** | **126** | **550** | **171.5** | **108** | **75** |
|  | **75** | **22.5** | **75** | **13.5** | **32** | **40** |
|  | **6** | **40** | **32** | **32** | **22.5** | **22.5** |
|  |  |  |  |  |  |  |
|  | **day10** |  |  |  |  |  |
|  | **786.5** | **171.5** | **550** | **256** | **108** | **75** |
|  | **75** | **32** | **75** | **13.5** | **40** | **62.5** |
|  | **13.5** | **62.5** | **40** | **32** | **40** | **32** |
|  |  |  |  |  |  |  |
|  | **day13** |  |  |  |  |  |
|  | **936** | **196** | **650** | **320** | **108** | **108** |
|  | **75** | **40** | **75** | **18** | **40** | **62.5** |
|  | **13.5** | **62.5** | **40** | **40** | **40** | **32** |

**Supplementary Table SVI.**

|  |  |  |  |
| --- | --- | --- | --- |
|  | | **DEC1 expression** | |
| **Low** | **High** |
| **Lymph node metastasis** | **Absent** | **28** | **22** |
| **Present** | **39** | **46** |