**Supplementary**

**Table S1. Nodal Stations and Zones in the IASLC Lymph Node (LN) Map**

|  |  |
| --- | --- |
| **Station** | **Supraclavicular zone** |
| 1R | Right low cervical, supraclavicular, and sternal notch LNs |
| 1L | Left low cervical, supraclavicular, and sternal notch LNs |
|  | **Upper zone (superior mediastinal nodes)** |
| 2R | Right upper paratracheal LN |
| 2L | Left upper paratracheal LN |
| 3A | Prevascular LN |
| 3P | Retrotracheal LN |
| 4R | Right lower paratracheal LN |
| 4L | Left lower paratracheal LN |
|  | **Aortopulmonary zone** |
| 5 | Subaortic LN |
| 6 | Paraaortic LN |
|  | **Subcarinal zone** |
| 7 | Subcarinal LN |
|  | **Lower zone (inferior mediastinal nodes)** |
| 8 | Paraesophageal LN |
|  | **Hilar and Interlobar zone (pulmonary nodes)** |
| 10R | Right hilar LN |
| 10L | Left hilar LN |
| 11R | Right interlobar LN |
| 11L | Left interlobar LN |

Fig. S1. Examples of LN stations according to IASLC.

Fig. S2. Overview of the proposed network.

**Table S2. Four-grade criteria for the subjective evaluation of the oncologists.**

|  |  |  |  |
| --- | --- | --- | --- |
| Index | Grade | Criteria | Score |
| 1 | No revision | The segmentation is perfect and completely acceptable for treatment. | 3 |
| 2 | Minor revision | The segmentation needs a few minor edits but has no significant clinical impact without correction. | 2 |
| 3 | Major revision | The segmentation needs significant revision. Treatment planning should not proceed without contour correction. | 1 |
| 4 | Rejection | The segmentation is unacceptable and needs to be re-drawn. | 0 |

**Table S3. Statistical analysis of significant differences in patient characteristics.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Characteristic |  | Training-validation dataset (n = 180) | Test dataset(n = 20) | P-value |
| Age | Mean ± SD | 58 ± 10 | 61 ± 9 | 0.262 |
| Location of the primary tumour | Left | 78 | 9 | 0.887 |
| Right | 102 | 11 |
| tumour anatomic site | Peripheral type | 57 | 6 | 0.879 |
| Central type | 123 | 14 |
| GTVnd | Yes | 131 | 15 | 0.832 |
| No | 49 | 5 |

**Table S4. Results of the Consistency Test of LN stations.**

|  |  |  |
| --- | --- | --- |
|  | **Oncologist B** |  |
| **Oncologist A** | **Negative** | **Positive** | **Total** |
| **Negative** | 45 | 182 | 227 |
| **Positive** | 186 | 72 | 258 |
| **Total**  | 231 | 254 | 485 |

**Table S5. Results of the Consistency Test of CTV.**

|  |  |  |
| --- | --- | --- |
|  | Oncologist B |  |
| Oncologist A | Negative | Positive | Total |
| Negative | 7 | 16 | 23 |
| Positive | 14 | 9 | 23 |
| Total  | 21 | 25 | 46 |

Fig. S3. CTVs from six oncologists at two different time points from the corresponding patient.