

**Supplementary data table**

| Patient  | Volume (ml) |       |           | Dose point | Doses (Gy) |      |           |
|----------|-------------|-------|-----------|------------|------------|------|-----------|
|          | ITV         | PTV*  | PTV_optim |            | ITV        | PTV  | PTV_optim |
| 1 (STH)  | 15.1        | 82.0  | 65.8      | D2%        | 24.1       | 23.9 | 23.9      |
|          |             |       |           | D50%       | 22.4       | 21.1 | 21.6      |
|          |             |       |           | D98%       | 19.4       | 17.9 | 19.8      |
| 2 (NUTH) | 15.9        | 57.5  | 57.5      | D2%        | 32.2       | 32.0 | -         |
|          |             |       |           | D50%       | 30.0       | 28.6 | -         |
|          |             |       |           | D98%       | 28.1       | 23.4 | -         |
| 3 (JCUH) | 63.2        | 140.8 | 139.0     | D2%        | 32.0       | 31.6 | 31.6      |
|          |             |       |           | D50%       | 28.6       | 27.9 | 27.9      |
|          |             |       |           | D98%       | 23.4       | 16.8 | 24.3      |
| 4 (NUTH) | 47.4        | 123.2 | 121.1     | D2%        | 32.8       | 32.5 | 32.5      |
|          |             |       |           | D50%       | 28.4       | 27.6 | 27.7      |
|          |             |       |           | D98%       | 26.1       | 22.6 | 24.3      |
| 5 (STH)  | 34.0        | 101.0 | 89.5      | D2%        | 29.7       | 29.5 | 29.6      |
|          |             |       |           | D50%       | 28.1       | 27.3 | 27.4      |
|          |             |       |           | D98%       | 23.8       | 17.5 | 24.3      |
| 6 (NUTH) | 47.1        | 101.5 | 101.5     | D2%        | 33.3       | 32.9 | -         |
|          |             |       |           | D50%       | 30.1       | 28.9 | -         |
|          |             |       |           | D98%       | 28.0       | 24.0 | -         |
| 7 (JCUH) | 41.9        | 88.7  | 87.4      | D2%        | 32.2       | 31.8 | 31.8      |
|          |             |       |           | D50%       | 28.8       | 27.9 | 27.9      |
|          |             |       |           | D98%       | 26.1       | 23.8 | 24.4      |

STH = Sheffield Teaching Hospitals, NUTH = Freeman Hospital Newcastle upon Tyne, JCUH = James Cook University Hospital Middlesbrough. ITV = internal target volume, PTV = planning target volume, PTV\_optim = optimised and prescribed planning target volume.

\*JCUH used ITV+3mm to generate PTV, other centres used ITV +5mm