**SUPLEMENTARY MATERIAL – Choice of *LETU* values**

**Further development of spinal cord re-treatment dose estimation: including radiotherapy with protons and light ions.**

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Point estimates of *LETU* obtained by linear regression techniques on multiple ion beam data sets which provide RBE values based on cell survival changes with LET, using a range of radiation doses, are given in the table:

|  |  |
| --- | --- |
| ***Ion*** | ***LETU (keV.m-1)*** |
| proton | 30.4 |
| helium | 120.1 |
| carbon | 157.1 |

For other ion species the LETU can be estimated from the Z (nuclear charge values) using the empirical relationship

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Source: Jones B and Hill MA. Physical Characteristics at the Turnover-points of Relative Biological Effect (RBE) with Linear Energy Transfer (LET). *Phys Med Biol* 2019; <https://doi.org/10.1088/1361-6560/ab52a5>