**TERT Promoter Mutation as a Potential Predictive Biomarker in BCG-Treated Bladder Cancer Patients**

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**Supplementary data**

**Supplementary Table S1.** Relation between clinicopathological characteristics and recurrence after BCG treatment. *p* values obtained from Wald test; bold values indicate *p* < 0.05. HR, Hazard Ratio; CI, Confidence Interval

| Clinicopathological characteristic | Age group | Gender | Stage | Grade | Tumour size | Multifocality | Recurrence status | BCG schedule |
|-----------------------------------|-----------|--------|-------|-------|-------------|--------------|-------------------|--------------|
|                                   | < 65 years | Female | Ta    | Low   | < 3 cm      | No           | Primary           | iBCG         |
|                                   |           |        |       |       |             |              |                   |              |
|                                   | ≥ 65 years| Male   | T1    | High  | ≥ 3 cm      | Yes          | Recurrent         | mBCG         |
|                                   |           |        |       |       |             |               |                   |              |
| **BCG therapy**                   | total n (%)|       |       |       |             |               |                   |              |
|                                   | success n (%)|     |       |       |             |               |                   |              |
|                                   | failure n (%)|    |       |       |             |               |                   |              |
| **HR (95% CI)**                   |           |       |       |       |             |               |                   |              |
| **p-value**                       |           |       |       |       |             |               |                   |              |
| Age group                         | 54 (43.2) | 41 (51.9) | 13 (28.3) | 1.0 | 0.002 |
| ≥ 65 years                        | 71 (56.8) | 38 (48.1) | 33 (71.7) | 2.827 (1.481-5.398) | |
| Gender                            | 19 (15.2) | 15 (19.0) | 4 (8.7) | 1.0 | 0.179 |
| Female                            | 106 (84.8) | 64 (81.0) | 42 (91.3) | 2.023 (0.724-5.654) | |
| Male                              | 74 (59.2) | 49 (62.0) | 25 (54.3) | 1.202 (0.672-2.148) | |
| Stage                             | 40 (32.0) | 25 (31.6) | 15 (35.3) | 1.0 | 0.557 |
| Ta                                | 85 (68.0) | 54 (68.4) | 31 (67.4) | 1.204 (0.648-2.238) | |
| T1                                | 75 (60.5) | 46 (58.2) | 29 (64.4) | 1.0 | 0.541 |
| Low                               | 49 (39.5) | 33 (41.8) | 16 (35.6) | 0.826 (0.448-1.524) | |
| High                              | 60 (48.0) | 43 (54.4) | 17 (37.0) | 1.0 | 0.024 |
| No                                | 65 (52.0) | 36 (45.6) | 29 (63.0) | 2.000 (1.096-3.649) | |
| Yes                               | 67 (53.6) | 48 (60.8) | 19 (41.3) | 1.0 | 0.051 |
| Primary                           | 58 (46.4) | 31 (39.2) | 27 (58.7) | 1.795 (0.998-3.229) | |
| Recurrent                         | 48 (38.4) | 24 (30.4) | 24 (52.2) | 1.0 | 0.021 |
| iBCG                              | 77 (61.6) | 55 (69.6) | 22 (47.8) | 0.505 (0.282-0.902) | |
| mBCG                              | 64.4 |

**Supplementary Table S2A.** Relation between tumour size and mutation status of FGFR3. *p*-Values obtained from Pearson’s Chi-Square test

| FGFR3 exon 7 | < 3 cm | > 3 cm | p-value |
|-------------|--------|--------|---------|

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Supplementary Table S2B. Multivariate analysis exploring the relation between tumour size and mutation status of FGFR3 adjusted to potential confounders. *p*-Values obtained from binary logistic regression test.

|                      | OR    | 95% CI       | p-value |
|----------------------|-------|--------------|---------|
| FGFR3 exon 7 R248C   | 0.373 | 0.116-1.202  | 0.099   |
| Age ≥ 65 years       | 1.414 | 0.505-3.963  | 0.510   |
| T1 tumors            | 0.588 | 0.197-1.756  | 0.342   |
| Multifocality        | 0.996 | 0.339-2.929  | 0.994   |
| Recurrent tumor      | 3.037 | 0.977-9.443  | 0.055   |

OR: Odds Ratio; CI: Confidence Interval.

Supplementary Figure S1. Kaplan–Meier recurrence-free survival function of BCG-NMIBC patients, grouped according to TERTp as wild type, -124G > A, and -146G > A. Overall comparison of recurrence-free survival rates was performed using the log-rank test.