Supplemental Information

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Group | Number | Grade | Age | Gender | TERT wt | TERT250G>A | TERT228G>T | TERT228G>A |
| pTa | 44 | 18/23/3/0 | 72.52 | 36/8 | 8 | 5 | 1 | 30 |
| pT1 | 29 | 0/8/20/1 | 70.77 | 27/2 | 3 | 7 | 0 | 19 |
| pT2+ | 31 | 0/1/28/2 | 76.42 | 27/4 | 1 | 3 | 1 | 26 |

***Table S1. Patient demographics.*** *For the cohort of 104 UBC patients whose cfDNA were analysed by ddPCR we show the number of patients with each stage and grade of disease (G1/G2/G3/unrecorded), median age (years), gender (no. male/female) and the mutation status of their tumour TERT mutation staus.*

***Figure S1.*** *Overview of study design.*





***Figure S2. Size fractionation of urinary cfDNA.*** *Panels A and B show tapestation traces of two urinary cfDNAs fractionated using Pronex beads. 1: unfractionated cfDNA, 2: short fragment fraction, 3: long fragment fraction.*

