

## ***Supplementary information***

### ***p53 mutation analysis; PCR conditions***

DNA was extracted from fresh tissues using the DNeasy Blood & Tissue Kit (Qiagen, Valencia, CA). Samples were amplified by PCR with the Immolase™ DNA Polymerase kit (Bioline, ECOGEN, Barcelona, Spain). For this reaction 50 ng of total DNA, 0.2 μM of primers, 4 mM of dNTPs, 1X Buffer, 2.5 mM of MgCl<sub>2</sub> and 0.1 μl of Immolase Taq were used. PCR was performed by using a 2720 Thermal Cycler (Applied Biosystems); with the following conditions: 95°C for 10 minutes, 35 cycles of 94°C for 30 seconds, 60-67°C (depending of the exon) for 1 minute and 72°C for 1 minute, and 72°C for 10min. PCR products were verified by agarose electrophoresis and purified using the QIAquick PCR Purification Kit (Qiagen). The dNTP's BigDye Terminator-Cycle Sequencing kit v3.1 (Applied Biosystems) was used and performed according to the manufacturer's recommendations for the sequencing PCR reaction in a 2720 Thermal Cycler (Applied Biosystems). Finally samples were purified with the Illustra AutoSeq G-50 Dye Terminator Removal Kit (Healthcare, Barcelona, Spain).