

Appendix 1*Signature*

The signatures for OS (SOS) and PFS model (SPFS) are the following with gender =1 for male and =2 for female and stage =1 when <3 and =2 when ≥3:

$$SOS = -1.51 * Gender + 0.806 * Stage - 50.99 * Coarseness_{pet} \quad [2]$$

$$SPFS = 0.8189 * Stage + 0.0020 Coarseness_{pet} \quad [3]$$

The SOS and the SPFS thresholds are 0.284 and 2.745 respectively.