

Supplementary text: Risk scores for initiators and promoters for prostate cancer

$$\begin{aligned} \text{Risk score 1} = & 0.9394 \times (\text{Age } 59 - 62) + 1.3757 \times (\text{Age } 63 - 66) \\ & + 1.8034 \times (\text{Age } > 66) + 0.1398 \times (\text{PSA } 4.01 - 5.0) \\ & + 0.7655 \times (\text{PSA } 5.01 - 6.0) + 0.7324 \times (\text{PSA } 6.01 - 8.0) \\ & + 0.9002 \times (\text{PSA } 8.01 - 10.0) + 1.2669 \times (\text{PSA } 10 +) \\ & + 0.4978 \times (\text{rs4242382(AA)}) + 0.10838 \times (\text{rs4242382(GA)}) \\ & + 0.3221 \times (\text{rs4430796}) + 0.2468 \times (\text{rs1859962}) \\ & + 0.4253 \times (\text{rs16901979}) + 0.3184 \times (\text{rs6983267}) \\ & + 0.1988 \times (\text{rs1447295}) + 0.0769 \times (\text{rs2660753}) \\ & + 0.1310 \times (\text{rs9364554}) + 0.1132 \times (\text{rs6465657}) \\ & + 0.2231 \times (\text{rs10993994}) + -0.1625 \times (\text{rs7931342}) \\ & + -0.1165 \times (\text{rs2735839}) + 0.2546 \times (\text{rs5945619}) \\ & + 0.1397 \times (\text{rs721048}) + -0.3011 \times (\text{rs10486567 (GG)}) \\ & + -0.3424 \times (\text{rs10486567 (GA)}) + 0.6471 \times (\text{family history}) \end{aligned}$$

$$\begin{aligned} \text{Risk score 2} = & 2.0643 \times (\text{rs200331695}) + 1.1631 \times (\text{IGF} - I_{Q2}) \\ & + 1.2528 \times (\text{IGF} - I_{Q3}) + 1.6292 \times (\text{IGF} - I_{Q4}) \\ & + 1.5151 \times (\text{GSTP1 hypermethylation}) \end{aligned}$$

Supplementary Figure 1. The cumulative risks of high-grade PrCa and PrCa death for patients with different PSA levels and genetic risk

