**Supplementary Table 2**
**Studies of Combinations of radiotherapy and androgen deprivation therapy (ADT)**

| Study | TNM stage | No. | Trial design | ADT | RT | Effect on OS |
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| *Trials of addition of radiotherapy to ADT* | | | | | | |
| SPCG-7/ SFUO-3<br>Scandinavia<br>Widmark 2011,Fossa 2015 | T1b-2 WHO Grade 1-3, T3 N0 M0 | 875 | ADT ± EBRT | LHRHa for 3 mo. + continuous flutamide | 70 Gy CFRT vs. no RT | 39%vs 30% overall mortality at 10 years (RR 0.68), 34% vs.17% CSM at 15yr. favouring combined treatment ($p < 0.0001$) |
| NCIC PR.3/MRC PRO7<br>Canada and UK<br>Mason 2016 | T3-4 (88%), PSA > 20 ng/ mL (64%), ISUP grade group 4-5 (36%) N0 M0 | 1,205 | ADT ± EBRT | Continuous LHRHa | 65–70 Gy CFRT vs. no RT | 10-yr. OS = 49% vs. 55% favouring combined treatment HR: 0.7, $p < 0.001$) |
| *Trials of addition of ADT to radiotherapy* | | | | | | |
| RTOG 85-31<br>USA<br>Pilepich 1997, 2005 | T3orN1M0 | 977 | EBRT ± ADT | Orchiectomy or LHRH agonist | 65–70 Gy | Overall survival benefit for ADT at 10 yrs 49% vs 39% (p=0.002) and reduction in distant metastases 24% vs 39% (P<0.001) Possible lack of benefit in centrally reviewed Gleason≤6 |
| Umea<br>Sweden<br>Granfors 1998,2006 | Locally advanced<br>with lymph node staging | 91 | EBRT +/- orchidectomy | orchidectomy | EBRT | FU 9/19 years : Overall survival 38%/76% and 61%/87% (p = 0.02/0.03), with CSM 44%/57% and 27%/36% (p = 0.06/p=0.02), |
| EORTC 22863<br>European multicentre<br>Bolla 2002, 2010 | T1–2 poorly differentiated and M0, or T3–4 N0–1 M0 | 415 | EBRT +/- ADT | LHRH agonist for 3 yr. (adjuvant) | EBRT 70 Gy RT | Overall survival 58% vs 40 % (HR 0.60 p=0.004) and PCSM 10% vs 30% (HR 0.34 P<0.0001) at 10 yr. in favour of combined treatment |
| RTOG 86-10<br>USA<br>Roach 2008 | T2–4 N0–1 | 456 | EBRT +/- ADT | Goserelin plus flutamide 2 mo. before, plus concomitant therapy | EBRT 65–70 Gy | Overall survival at 10years. 43% vs 34 % p=0.01, DSM 23% vs 36% p=0.01, DM 35% vs 47% P=0.006 |
| RTOG 94-08<br>USA<br>Jones 2011,2022 | T1b-T2bN0<br>PSA≤20 | 2028 | EBRT +/-ADT | LHRHa plus flutamide 2 mo. before, plus | EBT 66.6Gy | Overall survival at 10years. 62% vs 57% HR 1.17 p=0.03, DSM 4% vs |

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| | | | | concomitant therapy | | 8% HR1.87 p=0.001<br><br>Overall survival at 18years. 23% vs 23% HR 0.94 p=0.94, mean estimated survival time 11.8 yrs vs 11.3yrs p=0.05 DSM 8% vs 14% HR 0.56 p<0.01 |
| Massachusetts USA<br><br>D'Amico AV, et al.<br><br>2008 | T2N0M0 (localised unfavourable risk) | 206 | EBRT +/- ADT | LHRH agonist plus flutamide for 6 mo. | CFRT 70Gy | Overall survival benefit to RT+ADT (HR 1.8, p = 0.01)<br><br>Benefit may be mitigated if comorbidities present |
| TROG 96-01<br><br>Australia<br><br>Denham 2005,2011 | T2b–4 N0 M0 | 802 | EBRT +/- Neoadjuvant ADT | Goserelin plus flutamide for 3 vs 6 months | 66 Gy CfRT | 6m ADT vs no ADT: 10 year survival advantage (HR 0.6 p=0.0008, PCSS HR 0.49 p=0.0008,and DM HR 0.49 p=0.001)<br><br>3m ADT vs no ADT: improved PSA and event free progression only |
| PCS III<br><br>Canada<br><br>Nabid 2021,2021 | Intermediate risk | 600 | 76 Gy alone vs.<br>76 Gy + ADT vs.<br><br>70 Gy + ADT | LHRHa + bicalutamide 6 months. | 70 Gy vs.76Gy | Reduced risk of PCa death with ADT 1.5%(ADT+76Gy) vs 4.5% (ADT+70Gy) vs 12% (No ADT) Significantly improved FFS with ADT. More side effects with 76Gy |
| RTOG 0815<br><br>USA<br><br>Kraus 2023 | Intermediate risk | 1,492 | Dose escalated RT ± ADT | LHRHa + antiandrogen 6 months. | 79.2Gy (89%) or 45Gy + BT boost (11%) | No difference in OS at 10 years (10/119 deaths due to CaP No ADT vs 1/100 with ADT). Significantly improved biochemical failure-free, metastatic-free survival and PCa-specific survival for ADT arm. |

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| EORTC 22991<br><br>European multicentre<br><br>Bolla 2016,2021 | Intermediate (481) and limited high risk (338) | 819 | Dose escalated RT +/- 6m LHRHa | LHRHa for 6 months | 70Gy 74Gy or 78Gy CFRT or IMRT | All cases: 7year FU BPFS and clinical PFS improved by ADT HR 0.52 p≤0.001 and HR 0.63 p =0.001<br><br>Intermediate risk (74 and 78Gy): 12year FU, FFS: HR 0.53 p≤0.001, OS HR 0.74 p=0.08, DMFS.74 p=0.07 but only 8.5% developed mets in RT group and 5.7% with RT plus ADT. No difference between non-randomised 74 and 78 Gy groups |
| *Trials of duration of ADT with radiotherapy* | | | | | | |
| RTOG 920<br>USA<br><br>Lawton 2017 | Locally advanced T2c-T4<br><br>N0-1 | 1520 | RT and 4 m or 28m ADT | LHRHa for 4 or 28m | EBRT prostate 65-70Gy and pelvis 44-46GY | Follow-up 19.6 years<br><br>Long term ADT improved relative failure rates for OS,12% p=0.03 DFS 29% p<0.00, DM36% p<0.001and local failure 46% p=0.02 |
| EORTC 22961<br><br>European multicentre<br><br>Bolla 2009 | T2c-T4<br><br>N1 | 970 | RT and 6m vs 36m ADT | LHRHa for 6 or 36 months | Prostate 70gy and pelvic 50Gy CFRT | Increase of survival of 3.8%at 5years with long course ADT with reduction in PCa deaths of 1.6% |

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| ICORG 97-01<br>Ireland multicentre<br>Armstrong 2011 | T3-T4<br>High Risk | 276 | RT and ADT for 4 vs 8 months | LHRHa for 4 or 8 m | Prostate CFRT 70Gy | At 5 years OS 83% with 8m ADT vs 90% with 4m ADT<br>At 5 years biochemical FFS 63%% with 8m ADT vs 66% with 4m ADT |
| Prostate Cancer Study IV<br>Canada multicentre<br>Nabid 2018 | High Risk | 630 | RT and 18m vs 36m ADT | LHRHa for 18 or 36 months | Prostate and pelvic CFRT | Overall survival with 36m ADT 91% vs 86% with 18m ADT P=0.07<br>Better quality of life with 18m AST |
| DART01/05GICOR<br>Spain multicentre<br>Zapatero 2015 | Tic-T3b N0<br>Intermediate /high risk | 355 | RT and 4m vs 28m ADT | LHRHa for 4mvor 28 months | Prostate 76Gy CFRT | Overall 5 year survival 95% vs 86% HR 2.3 p=0.01, MFS 94% vs 83%, biochemical DFS 90% vs 81%.<br>Advantage may be confined to high-risk group |
| HEAT<br>MARCAP consortium: Meta-analysis of 12 RCT<br>Kishan 2022 | T1c-T4<br>N0-2 | 10,853 | Metaanalysis<br>1) No ADT<br>2) s/c ADT 3-4 vs 6-9m<br>3) s/c ADT4-6m vs l/c 18-36m | ADT none vs any,<br>Short course prolongation<br>Long course ADT | | 1)Addition of ADT associated with improved MFS, HR 0.83 p≤0.001.<br>2)Long duration of ADT associated with improved MFS, HR 0.84 p≤0.0013 Increased duration of neoadjuvant ADT not beneficial |
| *Trials of androgen receptor pathway inhibitors (ARPI) with LHRHa and radiotherapy* | | | | | | |

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| STAMPEDE: MRC<br><br>UK Switzeland<br><br>Attard 2022 | Very high risk M0<br><br>≥ 2 of T3/4, Gleason sum score 8-10,PSA≥40<br><br>M0 | 1974 | Combination of 2 trials<br><br>1)SOC vs SOC and abiraterone<br><br>2)SOC vs SOC +abiraterone and enzalutamide | Combination of 2 trials<br><br>1)SOC vs SOC and abiraterone<br><br>2)SOC vs SOC +abiraterone and enzalutamide | CFRT/IMRT 74Gy/37f or HFRT<br><br>Mandated in Node -ve encouraged in node +ve | MFS: At 6 yrs 82% combination vs 69% control HR 0.53 P≤0.0001<br><br>OS: At 6 yrs 86% combination vs 77% control HR 0.60 P≤0.0001<br><br>PCSS: At 6 yrs 93% combination vs 85%% control HR 0.49 P≤0.0001 |
| *Trials of ADT with radiotherapy post-prostatectomy* | | | | | | |
| RTOG 9601<br><br>USA<br><br>Shipley 2017 | pT2R1<br><br>pT3cN0 | 760 | Post prostatectomy<br><br>EBRT vs EBRT + bicalutamide 150 mg for 2 years | EBRT vs EBRT + bicalutamide 150 mg for 2 years | EBRT to prostate bed 64.8Gy | 12yr.DM<br>RT + ADT 14%vs RT23%<br>p = 0.005<br>OS<br>RT + ADT: 76%vsRT 71%<br>p = 0.04<br>DSM<br>RT + ADT: 5.8%vs RT 13.4% p < 0.001 |
| GETU-AFU<br><br>France<br><br>Sargos 2020 | ISUP grade ≤3. 89%<br><br>ISUP grade ≤4. 11% | 743 | Post prostatectomy<br><br>EBRT vs EBRT +6m LHRHa | EBRT vs EBRT +6m LHRHa | EBRT to prostate bed 66y | 10yr PFS: RT + ADT 64% vs RT49% p<0.0001,<br><br>10yr MFS: RT + ADT 75% vs RT 69% p=0.034 |
| RADICALS: MRC<br><br>UK, Switzerland<br><br>Parker 2024b,2024c | ≥1 risk factor (pT3/4, Gleason 7-10, positive margins, preoperative PSA≥10 ng/ml) | a)1480 (0 vs 6m ADT)<br><br>b)1523 6m vs 24m ADT) | Post prostatectomy | ADT randomisation<br><br>a) EBRT alone vs EBRT+6m ADT<br><br>b)EBRT+6m ADT vs EBRT +24m ADT | EBRT to prostate bed. 66Gy 33f daily or 52.5Gy 20f daily (non-randomised | a)No advantage for 6m ADT vs no ADT in 10yr MFS, 80.4% vs 79.2% p=0.35 or OS. Advantage for clinical PFS, HR 0.54 p<0.0001 with delay in restarting ADT<br><br>b)Advantage for 24m ADT vs 6m |

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| | | | | | | ADT in 10 yr MFS, 78.1% vs 71.9% HR0.773, p=0.029 with reduced distant metastases HR 0.634 p=0.0024,improved clinical PFS HR 0.728, p=0.0024 with delay in re-starting ADT HR 0.073, p=0.0047 |

**Abbreviations as in Supplementary Table 1, additionally:** ARPI androgen receptor pathway inhibitor; BT brachytherapy; CSM cause specific mortality; DMFS distant metastases free survival; DSM disease specific mortality; ISUP International Society of Urological Pathology; PCSM prostate cancer specific mortality; PFS progression free survival; RR relative risk; WHO World Health Organisation