

Table S1: Patient-reported outcomes questions and answer categories with described cut off for dichotomization

| Outcome | Question | Answer categories | Cut off for dichotomization |
|-------------------------|---|---|----------------------------------|
| Bowel function | | | |
| Urgency | Have you had to rush to the toilet to empty your bowels during the last month? | (0) "No never" (1) "Yes, but not every week" (2) "Yes at least once a week" (3) "Yes daily" | Cut off between response 1 and 2 |
| Leakage | Have you had any accidental leakage of liquid stool during the last month? | (0) "No never" (1) "Yes, but not every week" (2) "Yes at least once a week" (3) "Yes daily" | Cut off between response 1 and 2 |
| Leakage 2 | Have you emptied all the feces in your clothes without warning in the last month? | (1) "No", (2) "Yes, at least once per month", (3) "Yes, at least once per week", (4) "Yes, at least three times per week", (5) "Daily" | Cut off between response 1 and 2 |
| Frequency | How often do you open your bowels? | (1) "More than 7 times per day", (2) "4-7 times per day", (3) "1-3 times per day", (4) "Less than once per day" | Cut off between response 2 and 3 |
| Frequency 2 | Do you ever have to open your bowels again within one hour of the last bowel opening? | (1) "No, never", (2) "Yes, less than once per week", (3) "Yes, at least once per week", (4) "Daily" | Cut off between response 2 and 3 |
| Bleeding | Have you noticed bleeding from the rectum during the last month?" | (0) "No never" (1) "Yes, but not every week" (2) "Yes at least once a week" (3) "Yes daily" | Cut off between response 1 and 2 |
| Flatulence | Have there been occasions when you were unable to control your flatulence (wind) during the last month?" | (0) "No never" (1) "Yes, but not every week" (2) "Yes at least once a week" (3) "Yes daily" | Cut off between response 1 and 2 |
| Mucus | Have you noticed mucus from the anus during the last month? | (1) "No never", (2) "Yes, less often than once per week", (3) "Yes, at least once per week", (4) "Daily" | Cut off between response 2 and 3 |
| Bother from bowel | If you were to live for the rest of your life with your overall gastrointestinal problems, as it has been in the last month, how would you experience it? | (0) "Not applicable. I have no problems with the bowel" (1) "It would not bother me" (2) "Would bother me a little" (3) "Would bother me to a modest degree" (4) "Would bother me a lot" | Cut off between response 2 and 3 |
| Urinary function | | | |
| Incontinence | How often do you change pad, diaper or sanitary aid during a typical day (24 h)? | (0) "Not applicable, I don't use any protective pad" (1) "Less than once/ day" (2) "About once/day" (3) "About 2-3 times/day" (4) "About 4-5 times/day" (5); "About 6 times or more/day" | Cut off between response 1 and 2 |
| Frequency | "How often have you had to urinate again within two hours in the last month?" | (1) "Never", (2) "Less than 1 in 5 times", (3) "Less than half of the times", (4) "About half of the times", (5) "More than half of the times", (6) "Always" | Cut off between 4 and 5 |
| Urgency | How often have you had difficulty postponing urgent urination the last month? | (0) "Never" (1) "Less than half of the times when urinating" (2) "About half of the times when urinating" (3) "More than half of the times when urinating" (4) "Always" | Cut off between response 2 and 3 |
| Nocturia | How often, on average, have you got up to urinate during a typical night the last month?" | (0) "Never" (1) "About once" (2) "About twice" (3) "About three times" (4) "About four times" (5) "About five times or more" | Cut off between response 1 and 2 |
| Hematuria | Have you sought medical attention due to bleeding from the urinary tract or catheter? | (0) "No" (1) "Yes" | Cut off between response 0 and 1 |
| Urinary bother | If you were to have problems from the urinary tract for the rest of the life as it has been the previous | (0) "Not applicable. I have no problems with the urinary tract" (1) "It would not bother me" | Cut off between response 2 and 3 |

| | | | |
|----------------------------------|---|---|----------------------------------|
| | month, how much would that bother you? | (2) "Would bother me a little" (3) "Would bother me to a modest degree" (4) "Would bother me much" | |
| Erectile function | | | |
| Erectile dysfunction question 1 | When you had erections with sexual stimulation, how often was your erection hard enough for penetration during the past six months?" | (0) "Not applicable. Not been sexually active" (1) "Never been sufficiently stiff for intercourse" (2) "My penis was stiff enough for intercourse at less than half of the times" (3) "My penis was stiff enough for intercourse at more than half of the times" (4) "Always sufficiently stiff for intercourse" | Cut off between response 2 and 3 |
| Bother from erectile dysfunction | If your erectile function has deteriorated or disappeared and this would remain for the rest of your life, how would you feel about that? | (0) "Not applicable. I don't know if my erectile function has deteriorated or disappeared" (9) "Not applicable. My erectile function has not deteriorated or disappeared" (1) "It would not bother me" (2) "It would bother me slightly" (3) "It would bother me to a modest degree" (4) "It would bother me much" | Cut off between response 2 and 3 |
| Physical health | | | |
| Physical health | How do you assess your physical health in the last month? | Likert scale from (0) "Worst imaginable health" to (6) "Best imaginable health" | Cut off between response 4 and 5 |

Table S2: Bowel, urinary and erectile function compared between salvage radiotherapy group and control group as reported by patients at 8 years after surgery (odds ratio (95% CI))

| Questions | Adjusted MI* | Adjusted CC* | Unadjusted CC |
|--|-------------------|-------------------|-------------------|
| Bowel function | | | |
| Occasions when you could not control your flatus (wind) | 1.82(1.4;2.37) | 1.95(1.47;2.59) | 1.73(1.35;2.2) |
| Occasions when you accidentally leaked liquid stool | 1.9(1.38;2.62) | 2.16(1.52;3.05) | 1.75(1.28;2.36) |
| Such urge to open your bowels you had to rush to the toilet | 3.22(2.46;4.21) | 3.43(2.55;4.6) | 2.61(2.03;3.35) |
| Bleeding from anus | 3.21(2.32;4.44) | 3.32(2.33;4.69) | 3.13(2.29;4.25) |
| How often do you open your bowels | 1.23(0.92;1.64) | 1.19(0.88;1.63) | 1.21(0.91;1.61) |
| Mucus from anus | 4.14(2.98;5.76) | 3.99(2.79;5.65) | 4.26(3.09;5.83) |
| Need to open bowels within 1 hour after the previous | 1.53(1.18;1.98) | 1.58(1.19;2.08) | 1.58(1.22;2.03) |
| Emptied all the feces in your clothes without warning | 2.18(1.18;4.04) | 2.33(1.16;4.43) | 2.46(1.32;4.35) |
| Bother due to overall gastrointestinal problems | 1.27(0.9;1.8) | 1.24(0.85;1.79) | 1.36(0.97;1.89) |
| Urinary function | | | |
| Times changed pad, diaper or other sanitary protection over 24 hours | 2.23(1.65;3) | 2.28(1.64;3.16) | 1.79(1.4;2.27) |
| How often have you had to urinate again within two hours | 1.52(1.18;1.96) | 1.46(1.11;1.93) | 1.51(1.19;1.91) |
| How often have you had difficulty postponing urgent urination | 1.38(1.07;1.79) | 1.47(1.11;1.95) | 1.35(1.06;1.71) |
| How often, on average, have you got up and urinated during a typical night | 1.41(1.09;1.82) | 1.44(1.09;1.9) | 1.54(1.21;1.96) |
| Sought medical attention due to bleeding from the urinary tract or catheter | 11.17(5.68;21.99) | 10.87(5.15;23.37) | 11.45(6.03;22.06) |
| Bother due to overall urinary problems | 1.49(1.11;2) | 1.71(1.23;2.36) | 1.39(1.05;1.83) |
| Erectile function | | | |
| With erection from sexual stimulation, how often was your erection hard enough for penetration | 1.65(1.18;2.29) | 1.55(1.09;2.23) | 1.41(1.05;1.92) |
| Bother due to erectile dysfunction | 0.92(0.71;1.2) | 1(0.76;1.33) | 0.89(0.69;1.14) |
| Physical health | | | |
| Physical health | 1.33(1.04;1.69) | 1.35(1.03;1.76) | 1.31(1.03;1.65) |

Table S3: Bowel, urinary and erectile function dichotomized outcomes

| Question | Radiotherapy | | | Control | | |
|--|--------------|----------|----------|-----------|-----------|-----------|
| | Neg | Pos | Missing | Neg | Pos | Missing |
| Times change pad, diaper or other sanitary protection during 24 hours | 175(53%) | 92(28%) | 63(19%) | 1610(57%) | 469(17%) | 730(26%) |
| How often have you had to urinate again within two hours | 225(68%) | 35(11%) | 70(21%) | 1906(68%) | 153(5.4%) | 750(27%) |
| How often have you had difficulty postponing urgent urination | 225(68%) | 35(11%) | 70(21%) | 1861(66%) | 202(7.2%) | 746(27%) |
| How often, on average, gotten up and peed during a typical night | 156(47%) | 102(31%) | 72(22%) | 1448(52%) | 616(22%) | 745(27%) |
| Sought medical attention due to bleeding from the urinary tract or catheter | 124(38%) | 23(7%) | 183(55%) | 1111(40%) | 18(0.64%) | 1680(60%) |
| When erections with sexual stimulation how often was your erection hard enough for penetration | 57(25%) | 104(46%) | 65(29%) | 646(29%) | 852(38%) | 745(33%) |
| Occasions when you could not control your flatus (wind) | 201(61%) | 66(20%) | 63(19%) | 1776(63%) | 299(11%) | 734(26%) |
| Occasions when you accidentally leaked liquid stool | 254(77%) | 12(3.6%) | 64(19%) | 2023(72%) | 53(1.9%) | 733(26%) |
| Such urge to open your bowels you had to rush to the toilet | 227(69%) | 37(11%) | 66(20%) | 1965(70%) | 103(3.7%) | 741(26%) |
| Bleeding from anus | 243(74%) | 23(7%) | 64(19%) | 2042(73%) | 25(0.89%) | 742(26%) |
| How often do you open your bowels | 258(78%) | 8(2.4%) | 64(19%) | 2024(72%) | 52(1.9%) | 733(26%) |
| Mucus from anus | 248(75%) | 18(5.5%) | 64(19%) | 2031(72%) | 30(1.1%) | 748(27%) |
| Need to open bowels within 1 hour after the previous | 220(67%) | 45(14%) | 65(20%) | 1872(67%) | 194(6.9%) | 743(26%) |
| Emptied all the feces in your clothes without warning | 251(76%) | 15(4.5%) | 64(19%) | 2019(72%) | 49(1.7%) | 741(26%) |
| Physical health | 116(35%) | 150(45%) | 64(19%) | 1022(36%) | 1060(38%) | 727(26%) |
| Bother due to overall urinary problems | 172(68%) | 18(7.1%) | 63(25%) | 1131(58%) | 83(4.3%) | 724(37%) |
| Bother due to erectile dysfunction | 183(61%) | 54(18%) | 64(21%) | 1289(52%) | 423(17%) | 752(31%) |
| Bother due to overall gastrointestinal problems | 130(63%) | 11(5.4%) | 64(31%) | 630(45%) | 40(2.8%) | 744(53%) |