### Supplementary Table 1: Comparison of county cohort and national cohort

| Parameter                  | County 2010-2015 | SCRCR 2010-2014 |
|----------------------------|------------------|------------------|
|                            | No. (%), Unadjusted | No. (%), Unadjusted |
|                            | HR TTR, p         | HR OS, p         |
|                            | HR TTR, p         | HR OS, p         |
| Total Age (continuous)      | 416 (95%)        | 12446 (83%)      |
| Age Range                  | 72, 12           | 72, 11           |
| Sex                        |                  |                  |
| Male                       | 208 (50) (Ref)   | 6084 (49) (Ref)  |
| Female                     | 208 (50) 1.1     | 6362 (51) 0.9    |
| ASA                        |                  |                  |
| 1                          | 72 (17) (Ref)    | 1636 (13) (Ref)  |
| 2                          | 187 (45) 1.3     | 6510 (52) 1.0    |
| 3–4                        | 157 (38) 1.5     | 3976 (32) 1.1    |
| Surgery                    |                  |                  |
| Elective                   | 341 (82) (Ref)   | 10438 (84) (Ref) |
| Emergency                  | 75 (18) 3.0      | 1843 (15) 2.3    |
| Complications              |                  |                  |
| No                         | 298 (72) (Ref)   | 10171 (82) (Ref) |
| Yes                        | 118 (28) 1.5     | 2275 (18) 1.1    |
| pT                         |                  |                  |
| 1–2                        | 72 (17) <0.001   | 2770 (22) (Ref)  |
| 3                          | 269 (65) 3.8     | 7541 (61) 2.8    |
| 4                          | 75 (18) <0.001   | 2130 (17) <0.001 |
| pN                         |                  |                  |
| 0                          | 226 (54) <0.001  | 7845 (63) (Ref)  |
| 1                          | 123 (30) 2.9     | 2864 (23) <0.001 |
| 2                          | 67 (16) <0.001   | 1737 (14) <0.001 |
| Sampled nodes              |                  |                  |
| <12                        | 38 (9) (Ref)     | 1243 (10)        |
| ≥12                        | 378 (91) 2.7     | 10937 (88) 1.1   |
| Malignancy grade           |                  |                  |
| Low                        | 350 (84) (Ref)   | 9202 (74) (Ref)  |
| High                       | 66 (16) 2.1      | 2554 (21) 1.5    |
| Vascular invasion          |                  |                  |
| No                         | 291 (70) <0.001  | 8986 (72) (Ref)  |
| Yes                        | 112 (27) <0.001  | 2907 (23) 3.0    |
| Perineural invasion        |                  |                  |
| No                         | 343 (82) <0.001  | 9733 (78) (Ref)  |
| Yes                        | 52 (13) <0.001   | 1443 (12) 3.3    |
| Adjuvant treatment         |                  |                  |
| No                         | 268 (64) (Ref)   | 8930 (72) (Ref)  |
| Yes                        | 148 (36) <0.001  | 3516 (28) <0.001 |
| Recurrences                |                  |                  |
| No                         | 79 (19)          | 1965 (16)        |
| Mortality                  | 135 (32)         | 4010 (32)        |
| Complete cases             | 394 (95)         | 10309 (83)       |

**Subtitle supplementary table 1:** Complete cases for the variables described in table 1. Unadjusted HR and p-values for the variables in the baseline models for TTR and OS.