**Supplementary material 1** Comparison of baseline characteristics between married and unmarried patients.

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| --- | --- | --- | --- |
| Characteristics | Patients, No. (%) |  | P value |
| MarriedN=13402 | UnmarriedN=7483 |
| Grade I II III/IVAJCC stage I II III | 998(7.4)4706(35.1)7698(57.4)4055(30.3)6591(49.2)2756(20.6) | 562(7.5)2539(33.9)4382(58.6)2060(27.5)3835(51.2)1588(21.2) | 0.222<0.001 |
| Tumor size ≤2cm >2cm,≤5cm >5cmLN status Negative PositiveSurgery MAS BCT PMBRRadiation No YesChemotherapy No/Unknown YesHRs ER+/PR+ ER+/PR- ER-/PR+ ER-/PR- | 5922(44.2)5901(44.0)1527(11.4)6804(50.8)6404(47.8)4761(35.5)3607(26.9)5034(37.6)5991(44.7)7411(55.3)2368(17.7)11034(82.3)7956(59.4)1368(10.2)277(2.1)3801(28.4) | 2900(38.8)3555(47.5)992(13.3)3995(53.4)3369(45.0)2657(35.5)2359(31.5)2467(33.0)3219(43.0)4264(57.0)1403(18.7)6080(81.3)4406(58.9)794(10.6)130(1.7)2153(28.8) | <0.0010.001<0.0010.0190.0520.272 |

Abbreviations: MAS, mastectomy; BCT, breast-conserving therapy; PMBR, post-mastectomy breast reconstruction; AJCC, American Joint Committee on Cancer; HRs, hormone receptor status; LN, lymph node.