**Supplementary Materials**

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| **Supplementary Table 1. Differences in demographics and clinical characteristics of patients with and without Emergency Department (ED) visit** |
|   | **No ED visit (n=1348)** | **ED visit (n=38)** | **p-value** |
| **DEMOGRAPHICS** |  |  |
| **Age** |  |  |  |
| Mean (± SD) | 59.5 ± 11.0 | 57.4 ± 11.9 | 0.254 |
| **age group, n (%)** |  |  | 0.446 |
| 27-39 | 54 (4.0%) | 2 (5.3%) |  |
| 40-64 | 844 (62.6%) | 27 (71.1%) |  |
| ≥65 | 450 (33.4%) | 9 (23.7%) |  |
| **Gender, n (%)** |  |  | 0.737 |
| Female | 1344 (99.7%) | 38 (100%) |  |
| **Nationality, n (%)** |  |  | 0.918 |
| Singaporean/Permanent resident | 1282 (95.1%) | 36 (94.7%) |  |
| Foreigners | 66 (4.9%) | 2 (5.3%) |  |
| **Ethnicity, n (%)** |  |  | 0.698 |
| Chinese | 1044 (77.5%) | 27 (71.0%) |  |
| Malay | 139 (10.3%) | 6 (15.8%) |  |
| Indian | 80 (5.9%) | 2 (5.3%) |  |
| Othersa | 85 (6.3%) | 3 (7.9%) |  |
| **Marital status, n (%)** |  |  | 0.976 |
| Single | 215 (16.0%) | 7 (18.4%) |  |
| Married | 909 (67.4%) | 25 (65.8%) |  |
| Divorced | 57 (4.2%) | 1 (2.6%) |  |
| Widowed | 110 (8.2%) | 3 (7.9%) |  |
| Unknown/Missing | 57 (4.2%) | 2 (5.3%) |  |
| **Payment class, n (%)** |  |  | 0.219 |
| Subsidised | 1105 (82.0%) | 30 (79.0%) |  |
| Private | 186 (13.8%) | 8 (21.0%) |  |
| Non-Resident | 57 (4.2%) | 0 (0%) |  |
| **Employment, n (%)** |  |  | 0.534 |
| Yes | 306% (22.7%) | 7 (18.4%) |  |

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| **(continue) Supplementary Table 1. Differences in demographics and clinical characteristic of patients with and without Emergency Department (ED) visit** |
|   | **No ED (n=1348)** | **ED visit (n=38)** | **p-value** |
| **CLINICALS** |  |  |
| **Cancer diagnosis, n (%)** |  | 0.002\* |
| Breast | 1210 (89.8%) | 28 (73.7%) |  |
| Gynaecological | 138 (10.2%) | 10 (26.3%) |  |
| **Number of malignancies, n (%)** |  | 0.936 |
| 1 | 1273 (94.4%) | 36 (94.7%) |  |
| ≥2 | 75 (5.6%) | 2 (5.3%) |  |
| **Presence of metastasis, n (%)** |  | 0.077 |
| No | 1137 (84.4%) | 28 (73.7%) |  |
| Yes | 211 (15.7%) | 10 (26.3%) |  |
| **Time from cancer diagnosis** |  | 0.0011\* |
| Median (months) (IQR) | 36 (13-68) | 14 (2-42) |  |
| **Survivorship years, n (%)** | 0.001\* |
| ≤1 year | 326 (24.2%) | 19 (50.0%) |  |
| > 1 to 5 years | 626 (46.4%) | 11 (29.0%) |  |
| > 5 years | 396 (29.4%) | 8 (21.1%) |  |
| **ECOG performance status, n (%)** | 0.002\* |
| 0 | 1045 (77.5%) | 20 (52.6%) |  |
| 1 | 237 (17.6%) | 13 (34.2%) |  |
| ≥2 | 61 (4.5%) | 5 (13.2%) |  |
| Unsure/missing | 5 (0.4%) | 0 (0%) |  |
| **Charlson Comorbidity Index, n (%)** |  | 0.089 |
| 0 | 1008 (74.8%) | 25 (65.8%) |  |
| 1 | 250 (18.5%) | 7 (18.4%)  |  |
| ≥2 | 90 (6.7%) | 6 (15.8%) |  |
| **Presence of psychiatric diagnosisb, n (%)** | 0.967 |
| Yes | 73 (5.4%) | 2 (5.3%) |  |
| \*p<0.05, statistically significant difference a: Ethnicity (others): Bangladeshi, Burmese, Caucasian, Eurasian, Filipino, Indonesian, Japanese, Pakistani, Sikh, Thai, Vietnameseb: Anxiety, depression, polysubstance abuse/dependence, obsessive compulsive disorder, schizophrenia, mood disorder, adjustment disorder, bipolar disorder, acute stress reaction, panic disorderAbbreviations: SD- standard deviation, IQR- interquartile range, ECOG- Eastern Cooperative Oncology Group |

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| **Supplementary Table 2. Differences in demographics and clinical characteristics of patients with and without hospitalisation(s)** |
|   | **No Hospitalisation (n=1315)** | **Hospitalisation(s) (n=71)** | **p-value** |
| **DEMOGRAPHICS** |  |  |
| **Age** |  |  | 0.342 |
| Mean (± SD) | 59.5 ± 11.1 | 58.2 ± 10.4 |  |
| **Age group, n (%)** |  |  | 0.238 |
| 27-39 | 53 (4.0%) | 3 (4.2%) |  |
| 40-64 | 820 (62.4%) | 51 (71.8%) |  |
| ≥65 | 442 (33.6%) | 17 (23.0%) |  |
| **Gender, n (%)** |  |  | 0.071 |
| Female | 1312 (99.8%) | 70 (98.6%) |
| **Nationality, n (%)** |  |  | 0.785 |
| Singaporean/Permanent resident | 1250 (95.1%) | 68 (95.8%) |  |
| Foreigners | 65 (4.9%) | 3 (4.2%) |  |
| **Ethnicity, n (%)** |  |  | 0.654 |
| Chinese | 1016 (77.3%) | 55 (77.5%) |
| Malay | 136 (10.3%) | 9 (12.7%) |  |
| Indian | 80 (6.1%) | 2 (2.8%) |  |
| Othersa | 83 (6.3%) | 5 (7.0%) |  |
| **Marital status, n (%)** |  | 0.68 |
| Single | 212 (16.1%) | 10 (14.1%) |  |
| Married | 882 (67.1%) | 52 (73.2%) |  |
| Divorced | 57 (4.3%) | 1 (1.4%) |  |
| Widowed | 107 (8.2%) | 6 (8.5%) |  |
| Unknown/Missing | 57 (4.3%) | 2 (2.8%) |  |
| **Payment class, n (%)** |  | 0.794 |
| Subsidised | 1075 (81.7%) | 60 (84.5%) |
| Private | 185 (14.1%) | 9 (12.7%) |  |
| Non-Resident | 55 (4.2%) | 2 (2.8%) |  |
| **Employment, n (%)** |  |  | 0.04\* |
| Yes | 304 (23.1%) | 9 (12.7%) |  |

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| (**continue) Supplementary Table 2. Differences in demographics and clinical characteristics of patients with and without hospitalisation(s)** |
|  | **No Hospitalisation (n=1315)** | **Hospitalisation(s) (n=71)** | **p-value** |
| **CLINICALS** |   |   |
| **Latest cancer diagnosis, n (%)** |  | <0.001\* |
| Breast | 1187 (90.3%) | 51 (71.8%) |  |
| Gynaecological | 128 (9.7%) | 20 (28.2%) |  |
| **Number of malignancies, n (%)** |  | 0.976 |
| 1 | 1242 (94.5%) | 67 (94.4%) |  |
| ≥2 | 73 (5.5%) | 4 (5.6%) |  |
| **Presence of metastasis, n (%)** |  | 0.001\* |
| Yes | 200 (15.2%) | 21 (29.6%) |  |
| **Time from cancer diagnosis** |  | 0.0034\* |
| Median (months) (IQR) | 36 (14-68) | 19 (3-64) |  |
| **Survivorship years, n (%)** | <0.001\* |
| ≤1 year | 313 (23.8%) | 32 (45.1%) |  |
| > 1 to 5 years | 617 (46.9%) | 20 (28.2%) |  |
| > 5 years | 385 (29.3%) | 19 (26.7%) |  |
| **ECOG performance status, n (%)** | <0.001 |
| 0 | 1026 (78.0%) | 39 (54.9%) |  |
| 1 | 228 (17.3%) | 22 (31.0%) |  |
| ≥2 | 56 (4.3%) | 10 (14.1%) |  |
| Unsure/missing | 5 (0.4) | 0 (0%) |  |
| **Charlson Comorbidity Index** |  | 0.471 |
| 0 | 984 (74.8%) | 49 (69.0%) |  |
| 1 | 242 (18.4%) | 15 (21.1%) |  |
| 2 | 89 (6.8%) | 7 (9.9%) |  |
| **Presence of Psychiatric diagnosisb, n (%)** | 0.932 |
| Yes | 71 （5.4%） | 4（5.6%) |  |
| \*p<0.05, statistically significant difference a: Ethnicity (others): Bangladeshi, Burmese, Caucasian, Eurasian, Filipino, Indonesian, Japanese, Pakistani, Sikh, Thai, Vietnameseb: Anxiety, depression, polysubstance abuse/dependence, obsessive compulsive disorder, schizophrenia, mood disorder, adjustment disorder, bipolar disorder, acute stress reaction, panic disorderAbbreviations: SD- standard deviation, IQR- interquartile range, ECOG- Eastern Cooperative Oncology Group  |

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| **Supplementary Table 3. Multivariable analysis of the odds ratio of having** ≥**1 Emergency Department visit(s) within 30 days after self-reported Distress Thermometer & Problem List for low/high distress levels** |
| **Variable** | **Value** | **Unadjusted** | **Adjusted (model 1)^** | **Adjusted (model 2)^** |
|   |   | **OR** | **95% CI** | **OR** | **95% CI** | **OR** | **95% CI** |
| **Distress** | Low distress | 1.0 | Ref | 1.0 | Ref | 1.0 | Ref |
|  | High distress | 2.71 | 1.40-5.24 | 2.33 | 1.19-4.55 | 2.25 | 1.14-4.42 |
|  |  |  |  |  |  |  |  |
| **Time from cancer diagnosis (years)** | 0-1 | 3.3 | 1.56-7.01 | 3.13 | 1.46-6.70 | 2.86 | 1.32-6.18 |
| 1 to 5  | 1.0 | Ref | 1.00 | Ref | 1.0 | Ref |
| > 5 | 1.14 | 0.46-2.88 | 0.999 | 0.39-2.53 | 1.05 | 0.41-2.70 |
| **ECOG perform-ance status** | 0 | 1.0 | Ref | 1.0 | Ref | 1.0 | Ref |
| 1 | 2.87 | 1.41-5.84 | 2.79 | 1.35-5.75 | 2.86 | 1.29-6.33 |
| ≥2 | 4.28 | 1.55-11.80 | 4.06 | 1.44-11.48 | 6.91 | 2.21-21.64 |
| **Cancer diagnosis** | Breast | 1.0 | Ref | - | - | 1.0 | Ref |
| Gynae-cological  | 3.13 | 1.49-6.58 | - | - | 2.62 | 1.16-5.89 |
| **Age** | Contin-ous | 0.986 | 0.976-0.996 | - | - | 0.968 | 0.938-0.999 |
|  |  |  |  |  |  |  |  |
| **AIC** | 343.0 | 330.0 | 325.0 |
| **BIC** | 353.5 | 361.4 | 366.8 |
| Model 1: adjusted for time from cancer diagnosis, ECOG performance statusModel 2: adjusted for time from cancer diagnosis, ECOG performance status, cancer diagnosis, age^n=5 with missing ECOG performance status hence adjusted multivariate model is based on n=1381Abbreviation: OR- odds ratio, CI- confidence interval, AIC-Akaike information criteria, BIC- Bayesian information criteria, ECOG-Eastern Cooperative Oncology Group |

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| **Supplementary Table 4. Multivariable analysis of the odds ratio of having** ≥**1 hospitalisation(s) within 30 days after self-reported Distress Thermometer & Problem List for low/high distress levels** |
| **Variable** | **Value** | **Unadjusted** | **Adjusted (model 1)^** | **Adjusted (model 2)^** |
|  |  | **OR** | **95% CI** | **OR** | **95% CI** | **OR** | **95% CI** |
| **Distress** | Low distress | 1.0 | Ref | 1.0 | Ref | 1.0 | Ref |
|  | High distress | 2.46 | 1.51-4.00 | 2.15 | 1.31-3.52 | 2.11 | 1.27-3.49 |
| **Time from cancer diagnosis (years)** | 0-1 | 3.15 | 1.78-5.61 | 3.03 | 1.69-5.43 | 2.76 | 1.53-4.99 |
| 1 to 5  | 1.0 | Ref | 1.0 | Ref | 1.0 | Ref |
| > 5 | 1.52 | 0.80-2.89 | 1.35 | 0.70-2.59 | 1.44 | 0.746-2.79 |
| **ECOG perform-ance status** | 0 | 1.0 | Ref | 1.0 | Ref | 1.0 | Ref |
| 1 | 2.54 | 1.48-4.36 | 2.43 | 1.40-4.22 | 2.29 | 1.25-4.18 |
| ≥2 | 4.7 | 2.23-9.90 | 4.38 | 2.03-9.43 | 7.04 | 3.01-16.44 |
| **Cancer diagnosis** | Breast | 1.0 | Ref | - | - | 1.0 | Ref |
| Gynae-cological  | 3.63 | 2.10-6.30 | - | - | 3.45 | 1.90-6.28 |
| **Age** | Contin-ous | 0.99 | 0.97-1.01 | - | - | 0.97 | 0.95-0.997 |
|  |  |  |  |  |  |  |  |
| **AIC** | 550.3 | 526.2 | 510.8 |
| **BIC** | 560.7 | 557.6 | 552.6 |
| Model 1: adjusted for time from cancer diagnosis, ECOG performance statusModel 2: adjusted for time from cancer diagnosis, ECOG performance status, cancer diagnosis, age^n=5 with missing ECOG performance status hence adjusted multivariate model is based on n=1381Abbreviation: OR- odds ratio, CI- confidence interval, AIC-Akaike information criteria, BIC- Bayesian information criteria, ECOG-Eastern Cooperative Oncology Group |

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| **Supplementary Table 5. Multivariate analysis of the predictors of distress for subgroup of different survivorship phase (time from diagnosis)** |
|   |   | **Survivorship phases (time from cancer diagnosis)** |  |
| **Time from diagnosis** | **0-1 year (n=345)** | **>1 to 5 years (n=635)** | **>5 years (n=401)** |
| **variable** | **value** | **adjusted OR** | **95% CI** | **adjusted OR** | **95% CI** | **adjusted OR** | **95% CI** |
| **Age (years)** | <40 | 0.88 | 0.37-2.07 | 1.89 | 0.83-4.35 | 3.26 | 0.76-14.10 |
| 40-65 | reference | - | reference | - | reference | - |
| ≥65 | **0.55\*** | 0.33-0.92 | 0.79 | 0.54-1.15 | **0.52\*** | 0.32-0.85 |
| **Presence of psychiatric diagnosis** | Yes | 1.4 | 0.50-3.89 | **2.54\*** | 1.29-5.00 | **4.24\*** | 1.64-11.00 |
| **ECOG performance status** | 0 | reference | - | reference | - | reference | - |
| 1 | 1.4 | 0.73-2.32 | 1.42 | 0.90-2.26 | **1.85\*** | 1.10-3.13 |
| ≥2 | 2.17 | 0.69-6.80 | **2.61\*** | 1.15-5.90 | **3.79\*** | 1.57-9.17 |
| \*denotes statistical significance p<0.05 |  |  |  |  |

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| **Supplementary Table 6. Coefficient and p-value of the interaction terms between survivorship phase (i.e. time from cancer diagnosis) and Distress for ED visits and Hospitalisation** |
|   | **Time from cancer diagnosis** | **P value of interaction** **(difference in differences)** |
| **Distress level** | **0-1 year** | **>1 to 5 years** | **> 5 years** | **D1=D2** | **D2=D3** | **D1=D3** |
| **ED visit** |
| **Low distress** | -2.070 | -2.905 | -2.996 | - | - | - |
| **High distress** | -1.124 | -2.332 | -2.164 | - | - | - |
| **Differences** | **D1** | **D2** | **D3** | **-** | **-** | **-** |
|  | -0.946 | 1.781 | -1.872 | 0.166 | 0.789 | 0.900 |
| **Hospitalisation** |
| **Low distress** | -1.584 | -2.985 | -2.558 | - | - | - |
| **High distress** | -1.193 | -1.905 | -1.573 | - | - | - |
| **Differences** | **D1** | **D2** | **D3** | **-** | **-** | **-** |
|  | -0.391 | -1.792 | -1.365 | 0.265 | 0.892 | 0.346 |
| D1: High distress – low distress for 0-1 yearD2: high distress – low distress for >1-5 yearsD3: high distress – low distress for >5 yearsD1=D2: testing for the null hypothesis of D1=D2D2=D3: testing for the null hypothesis of D2=D3D1=D3: testing for the null hypothesis of D1=D3 |