## Supplementary Material

## Patient out-of-pocket medical expenses over 2 years among Queenslanders with and without a major cancer

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## Table S1. Baseline characteristics by cancer and matched comparison groups

Non-cancer groups include high GP users defined as $\geq 12$ visits to a GP comprising the following MBS items: 3-51, 195, 197, 199, 597, 599, 2497-2559, 5000-5067. CI, confidence interval; BMI, body mass index; N/A, not applicable; -, no $P$ value due to these being variables used in population matching. Data are presented as $n$ (\%) unless otherwise stated

|  | Cancer group $n=419$ | High GP-user group $n=419$ | High GP $v$. Cancer group $P$ value | General population group $n=421$ | General population $v$. Cancer group $P$ value |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Cancer type ${ }^{\text {A }}$ |  |  |  |  |  |
| Melanoma | 186 (44) | N/A | N/A | N/A | N/A |
| Prostate | 106 (25) |  |  |  |  |
| Breast | 77 (18) |  |  |  |  |
| Colorectal | 28 (7) |  |  |  |  |
| Lung | 22 (5) |  |  |  |  |
| Gender: female ${ }^{\text {A }}$ | 183 (44) | 183 (44) | - | 185 (44) | - |
| Age: mean (95\% CI) ${ }^{\text {A }}$ | 59.8 (59.1, 60.5) | 59.9 (59.2, 60.6) | - | 59.9 (59.1, 60.6) | - |
| Marital status: married or de facto ${ }^{\text {A }}$ | 340 (81) | 340 (81) | - | 340 (81) | - |
| Private health insurance: yes ${ }^{\text {A }}$ | 309 (74) | 309 (74) | - | 311 (74) | - |
| Current working status ${ }^{\text {A }}$ |  |  |  |  |  |
| Full or Part-time work | 230 (55) | 230 (55) | - | 232 (55) | - |
| Not working | 189 (45) | 189 (45) |  | 189 (45) |  |
| Highest education |  |  |  |  |  |
| High school | 194 (46) | 202 (48) | 0.25 | 193 (46) | 0.97 |
| Trade or diploma | 105 (25) | 105 (25) |  | 104 (25) |  |
| University degree | 90 (21) | 71 (17) |  | 96 (23) |  |
| Missing | 30 (7) | 41 (10) |  | 28 (7) |  |
| Smoking status |  |  |  |  |  |
| Current | 35 (8) | 32 (8) | 0.44 | 31 (7) | 0.56 |
| Ex-smoker | 165 (39) | 153 (37) |  | 155 (37) |  |
| Never | 218 (52) | 230 (55) |  | 235 (56) |  |
| Missing | 1 (0.2) | 4 (1) |  | 0 (0.0) |  |
| Number of alcoholic drinks per week |  |  |  |  |  |
| None or <1 | 125 (30) | 177 (42) | 0.001 | 165 (39) | 0.07 |
| 2-6 | 130 (31) | 125 (30) |  | 121 (29) |  |
| 7-20 | 123 (29) | 77 (18) |  | 97 (23) |  |
| $\geq 21$ | 39 (9) | 37 (9) |  | 37 (9) |  |
| Missing | 2 (0.5) | 3 (0.7) |  | 1 (0.3) |  |
| Hours of sleep (h) |  |  |  |  |  |
| $\leq 7$ | 280 (64) | 267 (64) | 0.83 | 269 (64) | 0.96 |
| $\geq 8$ | 143 (34) | 144 (35) |  | 145 (34) |  |
| Missing | 6 (1.4) | 8 (2) |  | 7 (1) |  |
| Self-rated health compared to others |  |  |  |  |  |
| Excellent | 68 (16) | 33 (8) | <0.001 | 63 (15) | 0.81 |
| Very good | 169 (40) | 126 (30) |  | 174 (41) |  |
| Good | 134 (32) | 154 (37) |  | 125 (30) |  |
| Fair | 40 (10) | 86 (21) |  | 52 (12) |  |
| Poor | 6 (1) | 17 (4) |  | 5 (1) |  |


|  | Cancer group $n=419$ | High GP-user group $n=419$ | High GP $v$. Cancer group $P$ value | $\begin{aligned} & \text { General } \\ & \text { population } \\ & \text { group } \\ & n=421 \end{aligned}$ | General population $v$. Cancer group $P$ value |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Missing | 2 (0.5) | 3 (1) |  | 2 (0.5) |  |
| Stress score past year ${ }^{\text {B }}$ |  |  |  |  |  |
| 1-3 | 131 (31) | 108 (26) | 0.08 | 132 (31) | 0.56 |
| 4-5 | 108 (26) | 91 (22) |  | 90 (21) |  |
| 6-7 | 96 (23) | 109 (26) |  | 99 (24) |  |
| 8-10 | 82 (20) | 107 (26) |  | 97 (23) |  |
| Missing | 2 (0.5) | 4 (1) |  | 3 (1) |  |
| Fruit and vegetable intake |  |  |  |  |  |
| Below recommended | 166 (40) | 158 (38) | 0.8 | 138 (33) | 0.059 |
| Meets one of fruit or veg | 219 (52) | 225 (54) |  | 234 (56) |  |
| Meets recommended | 34 (8) | 36 (9) |  | 49 (12) |  |
| BMI category |  |  |  |  |  |
| Underweight | 6 (1) | 3 (1) | 0.004 | 3 (0.7) | 0.3 |
| Normal | 122 (29) | 111 (26) |  | 114 (27) |  |
| Overweight | 179 (43) | 142 (34) |  | 168 (40) |  |
| Obese Class I | 72 (17) | 101 (24) |  | 80 (19) |  |
| Obese Class II and above | 40 (10) | 62 (15) |  | 56 (13) |  |

${ }^{\mathrm{A}}$ The groups were matched on these variables.
${ }^{B}$ Lower scores represent a lower level of reported stress.

Table S2. Multivariable generalised linear model (GLM) model of patient out-of-pocket costs (\$AUD; $n=762$ )

The GLM was tested with other forms and link functions, and the gamma family and log link functions performed best with the diagnostic tests used. These included v-fold comparisons, the normal plot of residuals, Pregibon link test, Pearson's correlation test and v-fold cross validation. CI, confidence interval; ref, referent; -, no $P$ value

|  | Mean cost ratios <br> $(95 \% ~ C I)$ | Adjusted mean (95\% CI) | $P$ value |
| :--- | :---: | :---: | :---: |
| Major cancer |  |  |  |
| No (high GP users) | $1.00(\mathrm{ref})$ | $\$ 1882(\$ 1627, \$ 2137)$ | - |
| $\quad$ Yes | $1.86(1.56,2.21)$ | $\$ 3499(\$ 3104, \$ 3894)$ | $<0.01$ |
| Age | $1.01(1,1.02)$ |  | 0.02 |
| Gender |  |  |  |
| $\quad$ Female | $1.00(\mathrm{ref})$ | $\$ 2500(\$ 2228, \$ 2772)$ | - |
| $\quad$ Male | $1.13(0.96,1.34)$ | $\$ 2836(\$ 2473, \$ 3199)$ | 0.14 |
| Marital status | $1.00(\mathrm{ref})$ | $\$ 2732(\$ 2482, \$ 2981)$ | - |
| $\quad$ Married or de facto | $0.90(0.69,1.17)$ | $\$ 2450(\$ 1790, \$ 3110)$ | 0.69 |
| $\quad$ Widowed, separated | $0.99(0.68,1.44)$ | $\$ 2706(\$ 1726, \$ 3686)$ | 0.69 |
| $\quad$ Never married | $1.00(\mathrm{ref})$ | $\$ 854(\$ 701, \$ 1006)$ | - |
| Private health insurance (PHI) status | $3.88(3.17,4.74)$ | $\$ 3310(\$ 2991, \$ 3629)$ | $<0.01$ |
| $\quad$ No PHI | $1.00(\mathrm{ref})$ | $\$ 2549(\$ 2210, \$ 2887)$ | - |
| $\quad$ Have PHI | $1.16(0.95,1.41)$ | $\$ 2950(\$ 2488, \$ 3412)$ | 0.15 |
| Education | $1.05(0.85,1.3)$ | $\$ 2683(\$ 2254, \$ 3111)$ | 0.63 |
| $\quad$ High school |  |  |  |
| Trade or diploma | $1.00(\mathrm{ref})$ | $\$ 2682(\$ 1895, \$ 3469)$ | - |
| University degree | $0.95(0.69,1.31)$ | $\$ 2537(\$ 2172, \$ 2902)$ | 0.74 |
| Self-rated health compared with | $1.04(0.75,1.43)$ | $\$ 2779(\$ 2396, \$ 3163)$ | 0.83 |
| others | $0.98(0.69,1.38)$ | $\$ 2622(\$ 2135, \$ 3108)$ | 0.90 |
| Excellent | $1.81(1.08,3.01)$ | $\$ 4844(\$ 2809, \$ 6878)$ | 0.02 |
| Very good |  |  |  |
| Good |  |  |  |
| Fair |  |  |  |
| Poor |  |  |  |

