

Transition to Palliative Care for People with Metastatic Prostate Cancer & their Caregivers: A Population Cohort Study

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Background



Metastatic prostate cancer (mPCa) associated with significant morbidity for individuals and healthcare system

- **Second leading cause of cancer death in males**
- **Median survival after refractory mPCa < 18 mths for those treated with docetaxel-based chemotherapy (1)**
- **Associated with significant healthcare expenditure, with 60% of total costs occurring in last 6 months of life (2)**
- **Few studies (small samples n <280) on the specific palliative care needs and access to services by men with mPCa**

1. Tannock et al., NEJM 2004; 2. Krahn et al, BJU International 2010; 3. Hwang et al, Cancer investigation 2004

Background



Increasing evidence of benefits associated with palliative care

- ✓ **Patients:** improved symptom relief, QOL, mood, communication, satisfaction with care, survival
- ✓ **Carers:** improved QOL, mood & bereavement outcome
- ✓ **Health system:** reduced aggressive EOL care and ED presentation, increased deaths outside hospital

1. Batikas JCO 2015; 2. Zimmermann Lancet 2014 3. Higginson, Lancet Res Med 2014; 4. Temel NEJM 2010; 5. Dionne-Odom, JCO 2015; 6. Hudson, Psycho-Oncology 2015; 7. Wright, JCO 2010; 8. Christakis, Soc Sci Med 2003. 9. Abernethy et al, JPSM 2013

Background



Variability in access to palliative care

- **Several barriers associated with PC introduction**
Both patient & health system factors
- **Variable engagement with PC**
Access rates ~ 30 – 70%) (1-2)
- **Often late engagement**
Median time to death = 22 – 42 days (3-4)
- **Current ‘needs-based’ models of PC delivery**
Can lead to late or ad-hoc referral

1. Philip et al, MJA 2015; 2. Hui et al, The Oncologist 2012; 3. Christakis, Soc Sci Med 2003; 4. Osta et al, J Palliat Med 2008.

Background



Timeliness of referral important to achieve benefits

- **Perception of being referred “too late”** associated with higher unmet needs/reported concerns, & lower satisfaction (1)
- **PC referral (IP &/or OP setting) > 1-3 months** associated with fewer: ED visits, hospitalisations, hospital deaths (2-4)
- **Hospital PC consultation within 6 days of admission** reduces overall costs by 14% (-\$1,312) (5)
- **PC referral within 30-60 days of adv. dx:** improved 1-year survival (15% difference compared to 3-mth waitlist control) (6) and improved caregiver mood (7)

1. Teno et al JPSM 2007; 2. Sundararajan et al, J Neuro Oncol 2014; 3. Hui et al, Cancer 2014; 4. Poulouse et al, 2013 JPSM; 5. May et al, JCO 2015; 6. Batikas et al JCO 2015; 7. Dionne-Odom et al, JCO 2015.

Aims



To describe the illness trajectory of people who die from metastatic prostate cancer (mPCA), with a view to identify transition points for optimal integration of palliative care.

- ⇒ Health service use
- ⇒ Disease- and treatment- related complications
- ⇒ Diagnostic & therapeutic procedures
- ⇒ Quality end-of-life care characteristics

Design



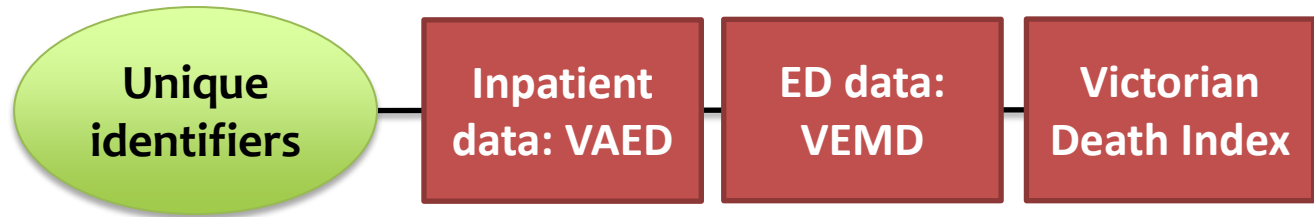
Mixed Method Study

1. **Population cohort study: using 10 years of linked hospital, emergency and death data.**
2. Qualitative study: interviews with patients, current/ bereaved caregivers and health professionals.
3. Delphi study: set of recommended points drafted by a core group will be subjected to a two-round online survey of experts to build systematic consensus.

⇒ **Leading to guidelines on integration of palliative care in advanced cancer**

Method

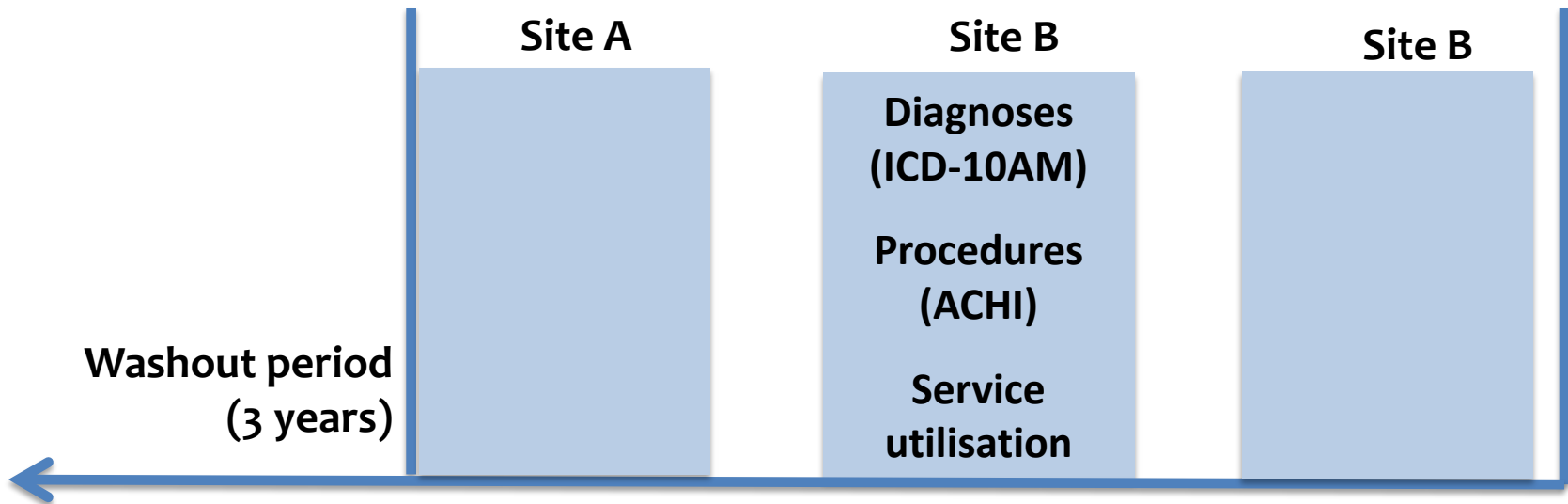
Population cohort study (2000 – 2010)



DATA SOURCES

First admission with metastatic disease

Death



Hospital admissions in Victoria from 2000 - 2010

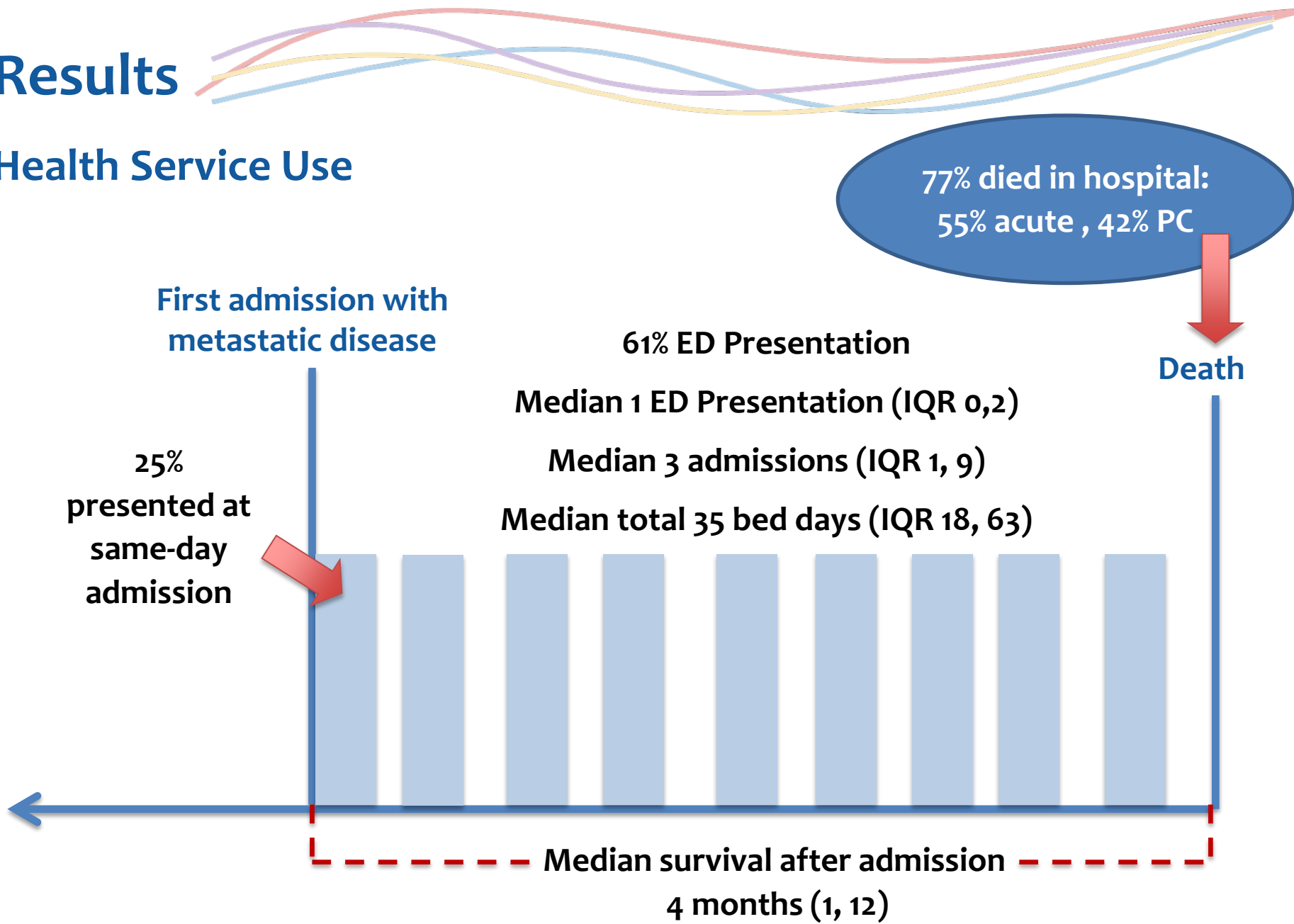
Results



- **Description of the cohort (N = 4,436)**
 - **64% Australian born**
 - **91% \geq 65 years**
 - **49% living in major city**
 - **76% partnered**
 - **53% utilised some private health insurance**
- **At first admission:**
 - **28% Charlson comorbidity index >1**
 - **84% had mets to bone, 11% lymph nodes, 8% lung, 8% liver; 19% had \geq 2 metastatic sites**

Results

Health Service Use



Results



Treatment- or disease- related complications

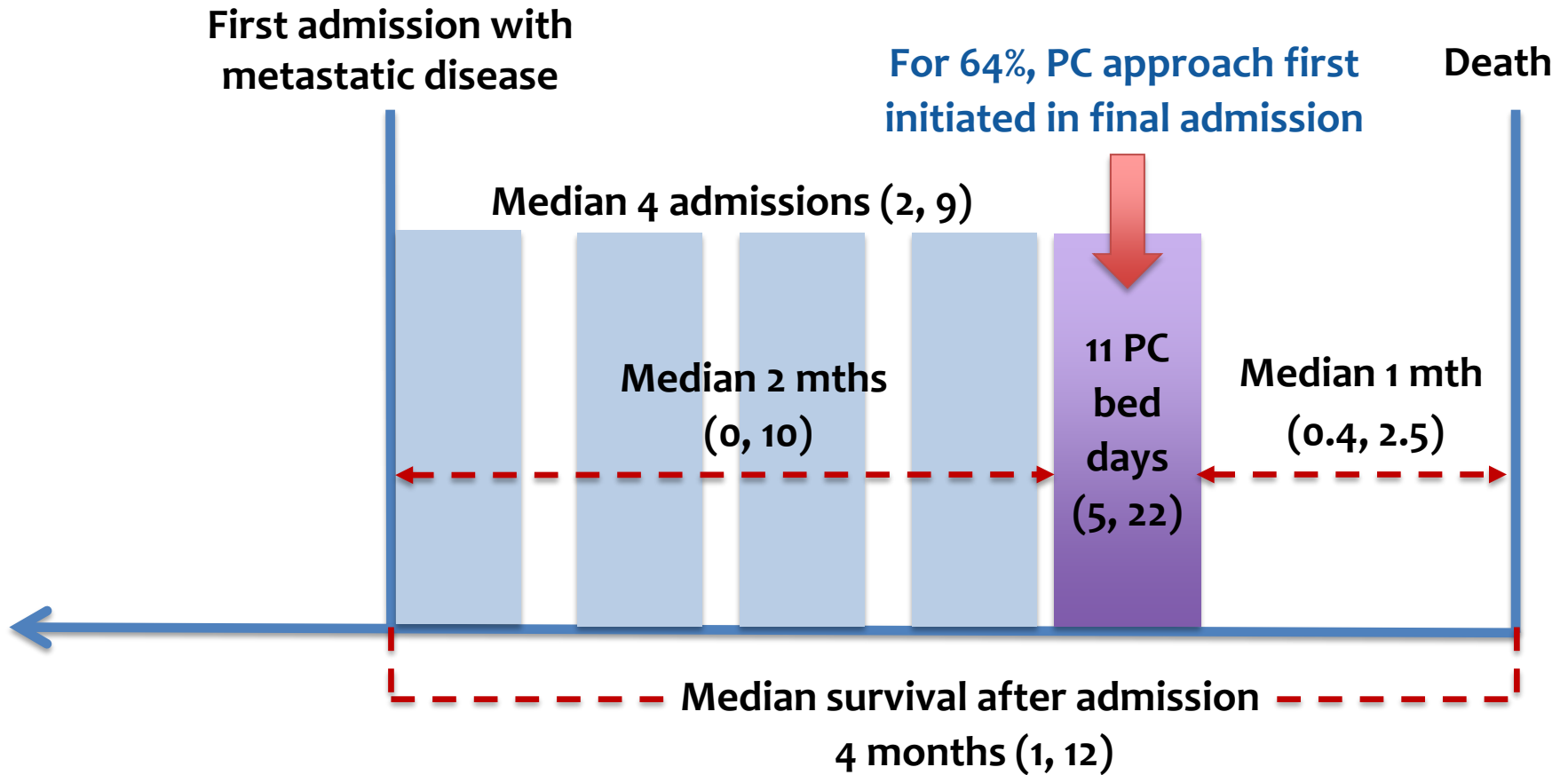
Across metastatic illness trajectory:

Diagnoses	Inpatient procedures
<p>Median 5 complications (3, 8)</p> <p>33% \geq 7 complications</p> <ul style="list-style-type: none">• LUTS (50%)• Infections (52%)• Anaemia (43%)• Skeletal events (21%)• Constipation (32%)	<p>73% therapeutic procedure</p> <p>45% \geq 2 procedures</p> <ul style="list-style-type: none">• Blood transfusions (48%)• Chemotherapy (38%)• Local procedures (27%) eg. TURP (11%)• Radiotherapy (16%)

Results

Palliative Care Engagement

- 60% of men received palliative approach to care PC, 39% accessed PC bed



Results

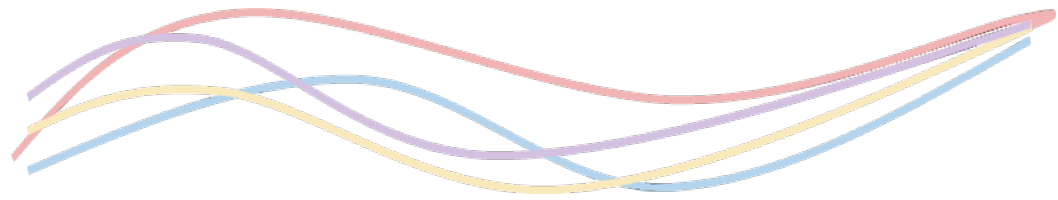
Indicators of Quality End of Life Care*

Aggressiveness of care (last 30 days of life)

> 1 ED presentation	311 (7)
> 1 acute hospital admission	2,124 (48)
Length of stay \geq 14 days	2,451 (55)
Intensive care admission	90 (2)
Chemotherapy in last 14 days of life	527 (12)
At least one indicator	3,685 (83)
\geq 2 indicators	1,464 (33)

*Earle C, et al. *J Clin Oncol* 2008; 26: 3860-6.

Summary of Results



- **Patients with mPCA experience high symptom burden, undergo multiple therapeutic interventions and have several admissions**
- **While 60% have a palliative approach to care in place by death, this is initiated by most (64%) in the final admission, a median of just 1 month prior to death**
- **Multi-day admission with metastatic disease is itself an important flag to initiate palliative care supports, if not already in place**

Discussion & Future Work



- **Population level data important source to capture statewide health service outcomes relating to delivery of quality care**
- **Data not without limitations – e.g. ideal to link to community data & routine recording of more specific palliative care referral and service information**
- **Interviews with consumers and other important stakeholders for more in-depth exploration currently underway**
- **Results expected to inform recommendations surrounding routine integration of palliative care, for inclusion in guideline document**



Questions?

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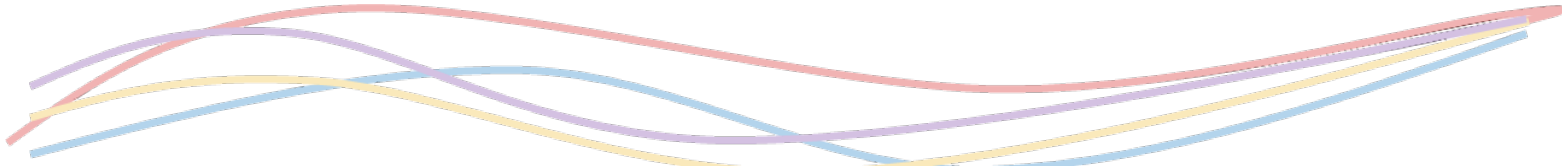
Results

Indicators of Poor Survival, Cox Proportional Hazards Model

Characteristic	Hazard Ratio (95% Confidence Interval)	p Value*
Age (years)		
< 65	0.58 (0.52 – 0.65)	<0.001*
65-74	0.69 (0.64 – 0.74)	<0.001*
75 +	1	
SEIFA index of economic disadvantage	0.95 (0.93 – 0.97)	0.001*
Multi-day admission	1.34 (1.20 – 1.50)	<0.001*
Renal failure	1.21 (1.10 – 1.32)	<0.001*
Metastasis to liver	1.98 (1.77 – 2.21)	<0.001*
Metastasis to brain	1.49 (1.25 – 1.78)	<0.001*
Metastasis to lung	1.33 (1.19 – 1.48)	<0.001*
Metastasis to lymph nodes	0.86 (0.78 – 0.95)	0.003*
Receipt of antineoplastic agent	0.87 (0.78 – 0.97)	0.012*
Fluid, electrolyte or nutritional disorder	1.20 (1.10 – 1.29)	<0.001*
Infection	1.19 (1.10 – 1.32)	0.001*



Results



Multi-day admission is itself an important flag

