

Factors associated with late-stage presentation of breast cancer in a multi-center patient navigation network in Malaysia

Jaganathan Maheswari^{1*}, Ang Boon Hong^{1*}, Ali Adibah³, Sharif Siti Zubaidah⁴, Mohamad Mazwela⁵, Mohd Khairy Azuddin⁶, Muniandy Kavitha¹, Zainal Hani¹, Sabtu Fizati⁵, Sapiee Norija³, Zainal Nur Hidayati⁶, Zaipudin Nur Fazilah Hanisah¹, Muniandi Mallika¹, Ghazali Aini Fatimah¹, Roimin France Olovia¹, Chong Clara Ching Ling¹, Rajaram Nadia¹, Jaafar Nurshuhadah⁴, Julaihi Rokayah³, Rahim Norlia⁶, Zakaria Nor Aniza⁵, Menon Isabella³, Tajudeen Nurul Ain⁶, Ho Kah Yee⁴, Md Yusof Suryani⁵, Abdul Wahab Mohamed Yusof⁷, Ab Hadi Imi Sairi⁷, Teo Soo-Hwang^{1,2}

¹Cancer Research Malaysia, ²Faculty of Medicine, University Malaya Cancer Research Institute, University of Malaya, ³Hospital Umum Sarawak, Sarawak, ⁴Hospital Queen Elizabeth II, Sabah, Malaysia, ⁵Hospital Tuanku Ja'afar, Negeri Sembilan, ⁶Hospital Tengku Ampuan Rahimah, Selangor, ⁷Ministry of Health, Malaysia

*Joint first authors

ABSTRACT

Introduction: Late presentation remains one of the major contributors to poor survival in low- and middle-income countries (LMICs). Here, we describe the factors associated with the late-stage presentation at a network of patient navigation centres in Ministry of Health hospitals in Malaysia. **Methods:** We determined factors associated with a late-stage presentation using adjusted multivariable analysis amongst patients enrolled in the patient navigation program in 4 hospitals (n=1,737). **Results:** Breast cancer patients reported facing various barriers to timely breast cancer care, including poor understanding of symptoms or diagnosis (60%), financial status (50%), and logistics (34%). Lack of support to inform about symptoms or diagnosis and reliance on public transport for mobility were independent predictors of late-stage presentation (p-value<0.05). Notably, these factors were also associated with treatment default, and the provision of navigation services (financial and logistic support, counselling and emotional support) improved adherence to treatment, suggesting that the provision of navigation could similarly address barriers to late presentation. **Conclusion:** Our findings show that factors associated with late presentation are similar to those associated with treatment default and that they are similar across different regions in Malaysia.