An Innovative Bench to Bedside Pipeline to Select & Test Patient Reported Outcome Measures (PROMs) for Personalized Symptom Management

Doris Howell,¹ Madeline Li,¹ Catherine Brown,¹ Andrew Hope,¹ Michael Brundage,² Gary Rodin,¹ Geoffrey Liu¹
¹Princess Margaret Cancer Centre, Toronto & Queens University², Kingston ON. Canada

INTRODUCTION

Patient reported outcome measures (PROMs), self-report of health status are key to precision medicine.¹

PROMs are also a common mechanism to understand and manage the impact of cancer and treatment on the “Whole Person”²; and to improve health outcomes.³

In 2011, the Ontario Patient Reported Outcomes for Symptoms and Toxicity Applied Research Unit (On-PROST) led by Directors, Dr. Geoff Liu and Dr. Doris Howell was established to test PROMs in 4 research cores (Fig. 1)

METHODS/RESULTS

On-PROST developed a unique bench to bedside research pipeline to accelerate field testing of PROMs for use in routine oncology practice (Fig 2).

This bench to bedside approach was applied to guide PROMs selection and for testing their accuracy compared to legacy measures as a first step to PROMs uptake in cancer care.

Our team has tested PROMs for physical function, sleep, dysphagia, fatigue, dyspnea, skin rash, erectile dysfunction; and for detecting adverse treatment toxicities using PRO-CTCAE measures. We also tested accuracy of PROMIS measures for sleep and fatigue.

Figure 1. Symptom and PRO Measures Research Cores

CONCLUSION

PROMs are at the heart of a person-centered care system and their integration with other genomic and biomedical data is essential to personalized cancer medicine.

PROMs are one of the most important & least expensive tailoring tools in personalized medicine! ⁴

On-PROST

Ontario Patient Reported Outcomes of Symptoms and Toxicity

Fig 2: Bench to Bedside Pipeline: Translation of PROMs into Better Health

Sources: ¹Jackson SE et al. Personalized cancer medicine. Int J Cancer 2014, 137(2):262-266. ²Howell Value in Health, 2013, ³ Kotronoulas G. et al. What is the value of the routine use of PROMs toward improvement of patient outcomes, processes of care, and health service outcomes in cancer care? A systematic review of controlled trials. JCO 2014, 32(14):1480-1501, 2014; ⁴Glasgow R. 2012.