



RACP Foundation Research Awards

FINAL REPORT

Project / Program Title		Optimising the use of methadone for cancer-related pain.
Name		Dr Phillip Good
Award Received		2015 Servier Staff "Barry Young" Research Establishment Fellowship
Report Date		2 June 2016
Chief Investigator / Supervisor		Professor Janet Hardy
Administering Institution		Mater Health Services
Funding Period	Start Date:	1 January 2015
	Finish Date:	31/12/2016

PROJECT SUMMARY

Pain remains a common and troubling symptom experienced by cancer patients. Moderate to severe pain in cancer is common and affects about two thirds of patients with advanced cancer. Modern medicine has the means and the knowledge to relieve pain in many patients, but evidence from surveys and observational studies shows that many patients have troublesome or severe pain and do not get adequate relief. Better methods are required to monitor, individualise and improve opioid dosing for treating cancer pain.

Methadone is a drug that has been found to be successful in treating cancer pain, but many clinicians report on the difficulties they have encountered in using this drug.

The primary aim of this study is to find ways to make methadone safer and more effective in controlling cancer pain.

This is being done by measuring methadone levels in saliva and blood, and using the results to see if it is possible to predict how much drug an individual might need to help their pain.

PROJECT AIMS / OBJECTIVES

1. To assess whether there is a relationship between methadone dosing, patient pain and plasma or saliva concentrations of the methadone +/- enantiomers and/or its metabolites.
2. To develop a pharmacokinetic model of methadone in cancer pain, to be used for individualised dosing.

SIGNIFICANCE AND OUTCOMES

We are still in the process of analysing methadone levels. The next step is to undertake Pharmacogenetic analyses and Population Pharmacokinetic (PK) Modelling.

PUBLICATIONS / PRESENTATIONS

1. George, R., M. Lobb, A. Haywood, S. Khan, J. Hardy, P. Good, S. Hennig and R. Norris (2016). Quantitative determination of the enantiomers of methadone in human plasma and saliva by chiral column chromatography coupled with mass spectrometric detection. *Talanta* 149: 142-148.
2. Good P, Afsharimani B, Movva R, Haywood A, Khan S, Hardy J. Therapeutic Challenges in Cancer Pain Management: A Systematic Review of Methadone. *Journal of Pain and Palliative Care Pharmacotherapy*. 2014;28(3):197-205. PubMed PMID: 2510203
3. Good P, Afsharimani B, Movva R, Haywood A, Khan S, Hardy J. Therapeutic challenges in cancer pain management: a systematic review of methadone and a future research. The Australian & New Zealand Society of Palliative Medicine, Gold Coast, 2014.