



RACP Foundation Research Awards

FINAL REPORT

Project / Program Title	Reducing the burden of cancer in patients with chronic kidney disease	
Name	Dr Eric Hoi Kit Au	
Award Received	2019 RACP Jacquot NHMRC Award for Excellence	
Report Date	26/02/2022	
Administering Institution	University of Sydney	
Funding Period	Start Date:	01/01/2018
	Finish Date:	31/12/2021

PROJECT SUMMARY

Chronic kidney disease is a significant risk factor for cancer. To improve our understanding of cancer in people with kidney disease, we investigated the patterns of cancer and cancer mortality in these patients. We also looked for risk factors that are associated with developing colorectal cancer in these patients and evaluated the role of cancer screening in people with chronic kidney disease.

PROJECT AIMS / OBJECTIVES

- 1) Understanding the pattern of cancer and cancer-related mortality in people with kidney disease
- 2) Evaluate the pattern of cancer risk across the patient journey for people with kidney disease, from dialysis to kidney transplantation to graft failure
- 3) Understanding the risk factors for colorectal cancer in people with chronic kidney disease
- 4) Evaluate the role of screening in reducing the burden of cancer in people with kidney disease

SIGNIFICANCE AND OUTCOMES

The findings so far from this project has demonstrated the greatly increased risk of cancer mortality in people on dialysis and after kidney transplantation. We demonstrated that this increased risk varied by age, sex and by cancer type. These findings improve our understanding of the epidemiology and risk factors for cancer in patients with kidney disease. This knowledge help patients with kidney disease better understanding their risk of cancer and for clinicians to better identify at-risk patients.

Additionally, we have found several factors to be associated with a diagnosis of colorectal cancer in people with kidney disease, including older age, male sex, azithromycin use and erythropoietin stimulating agent use. These results provide important information to both patients and clinicians in understanding the factors associated with advanced colorectal neoplasia in patients with kidney

disease, which can help guide decision making on colorectal cancer screening.

PUBLICATIONS / PRESENTATIONS

Abstract presentations:

Au EHK, et al. Spectrum and consistency of cancer outcomes in randomized trials in kidney transplant recipients: a systematic review. American Society of Nephrology Kidney Week 2020 (ePoster Presentation).

Au EHK, et al. Spectrum and consistency of cancer outcomes in randomized trials in kidney transplant recipients: a systematic review. International Congress of The Transplantation Society 2020 (ePoster Presentation).

Au EHK, et al. Risk factors for advanced colorectal neoplasia in chronic kidney disease. American Society of Nephrology Kidney Week – Washington 2019 (Poster Presentation).

Au EHK, et al. Risk factors for advanced colorectal neoplasia in kidney transplant recipients. TSANZ Annual Scientific Meeting – Sydney 2019 (President's Prize Symposium).

Au E, Chapman JR, Teixeira-Pinto A, Craig JC, Wong G. Exposure to a functioning kidney transplant and cancer risks. American Society of Nephrology Kidney Week – San Diego 2018 (Poster Presentation)

Au E, Chapman JR, Teixeira-Pinto A, Craig JC, Wong G. Exposure to a functioning kidney transplant and cancer risks. ANZSN Annual Scientific Meeting – Sydney 2018 (Mini-Oral Presentation)

Publications:

Au E, Wong G, Howard K, et al. Factors associated with advanced colorectal neoplasia in patients with CKD. American Journal of Kidney Diseases. 2021.

Au E, Francis A, Bernier-Jean A, Teixeira-Pinto, A. Prediction modelling – Part 1 – Regression modelling. Kidney International. 2020 May; 97(5):877-84.

Au E, Chapman J, Craig J, Lim W, Teixeira-Pinto A, Ullah S, McDonald S, Wong G. Overall and site-specific cancer mortality in patients on dialysis and after kidney transplantation. Journal of the American Society of Nephrology. 2019 Mar, 30(3): 471-480.

ACKNOWLEDGEMENTS

Acknowledgement in publications:

Au E, Wong G, Howard K, et al. Factors associated with advanced colorectal neoplasia in patients with CKD. American Journal of Kidney Diseases. 2021.

Au E, Francis A, Bernier-Jean A, Teixeira-Pinto, A. Prediction modelling – Part 1 – Regression modelling. Kidney International. 2020 May; 97(5):877-84.