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Dr Falk/Guts UK Awards 2020

MEDICAL STUDENT ESSAY PRIZE WINNER: Mr William Cambridge

PROJECT:

Meta-analysis and Meta-regression of Survival After Liver Transplantation for Unresectable Perihilar Cholangiocarcinoma



Mr William Cambridge undertook this research at the Department of Clinical Surgery, University of Edinburgh, whilst intercalating in a BMedSci degree in Surgical Sciences. He is currently completing his fifth year at The University of Edinburgh Medical School. He is President of the Edinburgh Student Surgical Society and sits on the STARSurg Steering Committee.

Mr Cambridge explains:

'One of the reasons I was inspired to complete this project was my interest in liver surgery. Survival rates for many types of liver cancer are sadly extremely low, yet conversely, surgery has the potential to extend life expectancy for at least some patients.

'In the United Kingdom, curative therapy for perihilar cholangiocarcinoma (pCCA) remains limited to surgical resection. However, the majority of patients with pCCA present with unresectable disease and are treated palliatively, whilst those with resectable pCCA have poor outcomes, 5-year overall survival reported as between 35 and 45%.

'However, in various centres across the United States & Europe, the use of neoadjuvant chemoradiation and liver transplantation to treat unresectable pCCA has become increasingly common, with impressive outcomes reported.

'We completed a systematic review and meta-analysis aiming to evaluate the outcomes of patients undergoing transplantation, with and without neoadjuvant chemoradiation, for unresectable pCCA.

Sub-group analysis of papers identified through this review found that those undergoing neoadjuvant chemoradiation and liver transplantation had a pooled 5-year overall survival of 65.1%. Additionally, we undertook to determine whether the proportion of patients with primary sclerosing cholangitis (PSC) per study affected overall survival. At 5-years there was a positive correlation between the number of PSC patients and overall survival.

'Despite these results, transplantation is still contraindicated for those with unresectable pCCA in the UK. Our systematic review and meta-analysis has shown that, in selected patients able to complete a neoadjuvant-transplant protocol, survival exceeds the 50% 5-year overall survival threshold required by many European transplant centres, and that serious consideration should be given to expanding transplantation to those with pCCA in the UK, especially in the setting of PSC. 'I hope that more treatment options become available for those with cholangiocarcinoma, hopefully improving outcomes for those suffering from this rare cancer.'

Mr Cambridge's Project Supervisor, Clinical Lecturer & Hon Specialist Registrar Rachel Guest comments:

'Will tackled this highly challenging project with determination and relish and I was deeply impressed with his approach to the collection of the data and its analysis. He equipped himself with the necessary skills required to perform a rigorous systematic review and meta-analysis by attending a postgraduate course. He has shown strong engagement with the literature in the field and has presented at national meetings. His work has resulted in the publication of the project in one of the most prestigious surgical journals, the Annals of Surgery and has been received with genuine acclaim by leaders in the transplant field. William no doubt has a bright future ahead of him, whether he pursues surgery or any other field of medicine and he will be a true asset to whichever institution he joins.'

Mr Cambridge states:

'I chose to complete this project due to my interest in both surgical oncology and hepatopancreaticobiliary surgery, a career path I aim to pursue. This aim has only been strengthened following the completion of this project and being honoured with this prize.

'The recognition of this award has shown me the value that this work has, and a real belief in my ability to complete research, thus motivating me to complete further work in the field of transplant oncology.'



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Dr Falk Pharma UK Ltd Unit K, Bourne End Business Park Cores End Road Bourne End SL8 5AS Tel: +44 (0) 1628 536 600 Email: office@drfalkpharma.co.uk

Company Registration Number: 2307698