

Chirurgische Klinik

Klinik für Allgemein-, Viszeral-, und Transplantationschirurgie

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March 26th, 2020

IHPBA Kenneth Warren Fellowship 2019/2020

Re.: Midterm report

Project: Microbiome and outcomes in pancreatic surgery

Dear Kenneth Warren Fellowship Committee,

I hereby report on my first 6-month activity at the Heidelberg University Hospital (October 2019-March 2020).

Main project: Microbiome and outcomes in pancreatic surgery Before the concrete beginning of the project, the initial design was partially modified. The growing interests on the microbiome in several fields of medicine is well explained by the increasing amount of published literature. We had initially planned to include patients undergoing pancreatoduodenectomy, and to analyze the microbial component of the bile collected intraoperatively in comparison with the preoperative stool microbiome. We finally decided, instead, to perform a more complex analysis of the whole biliary and stool microbiome, in order to improve the quality of the study. Both biliary and stool microbiome will be analyzed in a culture-independent manner through a metagenomic sequencing technology.

Despite no limitations from the local revise board committee and the full support from my Mentor and colleagues, we found some shortcomings during the initial recruitment. This was mainly related to the fact that two other studies involving the microbiome in pancreatic surgical patients have been submitted to the local IRB, one at our Pancreatic Research Lab, and one at the Anesthesiology department. Even though the endpoints are very specific for each study, the enrolled population will be partially overlapping. Consequently, shared protocols, same informed consent and agreement for the logistics were needed.

The upgrade in the study design and the need for agreement with the P.I.s of the other projects led to a delay up to November 2019 for starting the recruitment. The normal reduction in the elective activity during the Christmas holidays represented a further small inconveniency. Then, we

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have been finally able to push with the schedule and to recruit the planned number of patients, so that we have now 12 samples stored for further analysis.

Because of the relative delay at the beginning and expected emergency for the next months, I am already intentioned to extend my period in Heidelberg for at least 4 to 8 more months after October 2020, in order to complete the recruitment and the sample processing. I will be responsible for the financial need related to the extended time.

Collateral projects

During these months of scholarship, I have been working also on other clinical research projects:

- Glucose metabolisms in pancreatic surgical patients
 - Effect of preoperative glucose on long-term outcomes in pNEN, which led to the publication of a paper entitled "Preoperative dysglycemia is associated with decreased survival in patients with pancreatic neuroendocrine neoplasms" (Surgery, March 2020, PMID: 31889543), also presented as a short talk during the Best Poster section at the World Pancreas Forum in Bern (Switzerland) in February 2020;
 - Effect of perioperative glucose on surgical outcomes in pancreatic resection. The statistical analysis has been completed in February and the drafting of the manuscript is on-going.
- Surgical management of intraductal papillary mucinous neoplasms (IPMN), focusing on the time-point of resection (manuscript under submission)
- Surgical outcomes following two-times Whipple and total pancreatectomy (statistical analysis on-going).

I sincerely appreciate the great opportunity of being here in Heidelberg to improve my skills and expertise in the field of pancreatic surgery and pancreatic disease, which is based on the support of the IHPBA Kenneth Warren Fellowship. I hope you will renew your trust in my work, and I am happy to provide additional details, if required.

Best regards,

Marta Sandini, MD