



ESMO Clinical Unit Visit Report

Herlev Hospital - CCIT Herlev, Denmark

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Clinical Unit Visit at CCIT

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During my last year of training as a Medical Oncologist, I had the opportunity to spend 6 weeks in a high-expertise centre in the field of Immunotherapy and Melanoma, according to my preferences and future professional aspirations. Taking into account that during my residency program I worked along with Dr Arance, I decided to apply for a Clinical Unit Visit Fellowship in the Center for Cancer Immune Therapies, Hospital Herlev, Copenhagen, under Dr Svane supervision. The main objectives of this fellowship were to acquire basic knowledge in adoptive cell therapy as well as in laboratory assays regarding different aspects of immunology, and to gain a deeper insight into melanoma treatments and in early-phase clinical trials of novel immunotherapies.

The internship was divided into 4 main sections: melanoma clinics, early-phase clinical trials of immunotherapies, adoptive T-cell therapy and lab-based methods in Immunology. Although the schedule and the time dedicated to each different field initially followed a weekly programme, it could be modified depending on the staff agenda and on the timing of particular events of interest, i.e the TIL product infusion in a patient.

At least two days per week, I visited melanoma patients with Dr Inge M Svane and Dr Marco Donia. Despite the fact that most patients were treated with standard treatments, there were also patients receiving treatment within the context of phase II-III clinical trials, i.e combination of BRAF and MEK inhibitors plus anti-PD1 therapy. It was a highly enriching experience to witness how a different Oncology Department works, basically due to different technical and staff resources. I was also invited to attend the Melanoma Board Committee where some patients of interest were discussed by oncologists, dermatologists, plastic surgeons and radiologists. It used to take place once per week.

I also was able to attend outpatient clinics from the two Phase I units at Herlev Hospital and at Rigshospitalet. I spent one week at the Phase I Unit at Rigshospitalet (Copenhagen) with Dr Ulrik Lassen. There, apart from visiting patients already enrolled in early-phase, even first-in-human, clinical trials, I was able to participate in the Tumor Board Committee for new potential candidates. At that moment, Dr Lassen was leading the CoPPO (Copenhagen Prospective Personalized Oncology program), a prospective study using genomic screening to select patients for targeted molecular treatment, and it was one of the most noticeable things I got from this week. From those patients participating in it, we obtained an



exhaustive tumor profile (including genomic and transcriptomic data) and potential target drugs (already marketed or under development). After discussion and review at the Tumor Board, we offered the best therapeutic option according to the specific genetic profile.

Regarding adoptive T-cell therapies undertaken at Herlev Hospital, I had the opportunity to become part of the team along the whole process of a patient diagnosed with ovarian cancer who was treated with tumor-infiltrating lymphocytes (TIL) therapy. During my stay, I visited the GMPs facilities where the product was prepared. I also joined the medical staff who were responsible of the patient during the myeloablative chemotherapy, the re-infusion of the TIL product as well as during the IL-2 administration. We had to review the protocol daily and to treat and be aware of the eventual toxicities related to the treatment. In this particular case, the patient only presented with febrile neutropenia and she received the IL-2 as scheduled without any incidences.

In addition, I assisted in the Immunology laboratory and gained an overall view about how the bench-side work is. Amongst other, I learned how to perform and interpret the following techniques that were carried out at the laboratory of Dr Svane: standard isolation and expansion of T cells from tumor fragments, intracellular stainings, cytotoxic assays and fluorescence-activated cell sorter (FACS).

Overall, I found this experience largely enriching from a professional and personal point of view and I would doubtlessly encourage my peers to pursue an ESMO Clinical Unit Visit Fellowship. The most remarkably experiences were to participate in such a novel therapeutic approach as it is the TIL therapy and to get an introductory view of the lab. Strikingly, the former has allowed me to design a future translational research plan after learning which assays and what is feasible to assess in a laboratory such as the leaded by Dr Svane.

Finally, I would like to acknowledge ESMO and all the team of CCIT at Herlev Hospital –particularly Dr Svane- and Rigshospitalet for supporting me in such gainful and valuable experience

Mandatory:

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Francisco Aya

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