

2016 HICARE/IAEA Internship Report

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Overview of the internship

Duration: 1/10/2016 – 31/12/2016

Dispatching agency: Hiroshima International Council for Health Care of the Radiation-exposed (HICARE)

Agency: International Atomic Energy Agency (IAEA)

Section: Applied Radiation Biology and Radiotherapy,

Division of Human Health,

Department of Nuclear Sciences and Applications

Purpose: To give an opportunity for or educate a student to understand the meaning and importance of medicines relating to radiation. The student will be a part of the human resources that successfully perform and achieve therapy for radiated patients in Hiroshima.

With aid from HICARE, I did a 3-month internship at the IAEA in Vienna, Austria. Hiroshima University provides a 4-month term for all the medical students to do any medical research. I am interested in the kind of research an international organization does and how that research is used to make effective and concrete declarations or guidelines. During the internship, the ARBR section was in charge of accepting my internship and I worked with them mainly. More details about the tasks I performed are written below.

Each task in detail

i. Studying about SDGs and collecting data from GHO

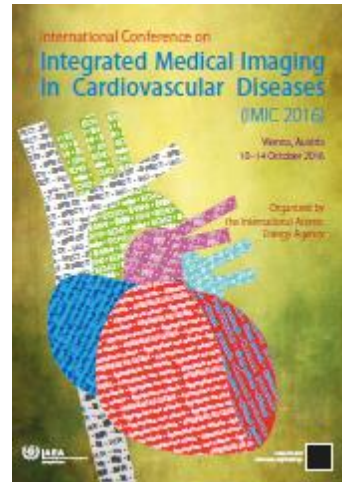
In the first week, my direct supervisor was away for a conference in another country. Mr. Rubio gave me an opportunity to learn about the Sustainable Development Goals (SDGs) and I made a ppt. for feedback. Regarding the SDGs, I collected all the data from the Global Health Observatory (GHO) by indicator.

ii. Assisting with research

Ms. Fidarova and Mr. Rosenblatt were doing a survey of the clearing situation and quality of radiotherapy in Post-Soviet countries. The project was started in 2012 and all the data were already collected. I checked the data (answers from centers participating in this survey) and contacted representatives of each country to clarify whether or not there was any misunderstanding about the questions. After clearing data, the data were calculated according to each indicator with excel and I made graphs for some outcomes. With tasks relating to this project, I could grasp the situation about countries participating in this survey, and I could also see a kind of standard for rating or comparing the quality of medicine, especially in radiotherapy. In spite of my lack of professional experience and knowledge, Ms. Fidarova let me be involved in many parts of this survey. It was a good experience. This survey is strongly related to the workshop written below; it means I was able to attend the workshop with a greater understanding.

iii. Attending IMIC

From 10 October to 14 October, the Nuclear Medicine and Diagnostic Imaging Section (NMDI) in the Division of Human Health held an international conference, the “International Conference on Integrated Medical Imaging in Cardiovascular Diseases” (IMIC 2016). All the presentations were broadcasted and recorded via an internal network for staff in the IAEA building. I watched some of the presentations. Some presentations included example cases for which test doctors had to choose patients and explain about pre-test probability to them. I could see how much evidence based medicine (EBM) was focused in medical fields nowadays.



iv. Visiting laboratory and annual meeting

In October, there was an annual Division meeting. It was usually held inside the IAEA building (VIC), but this year it took place in a laboratory in Seibersdorf. The laboratory was under construction and we could visit and see what research or activities were being done in the laboratory. The tour was provided to all the staff in the Division. The staff staying in VIC and also working in the Monaco office attended via videophone.

v. Attending the Task Force Meeting (TFM)

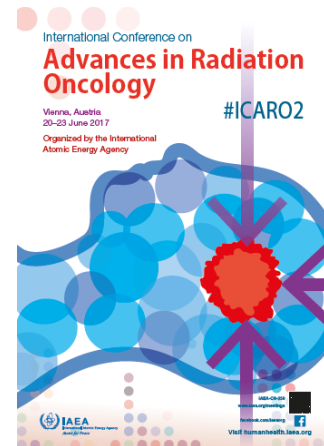
Mr. Prasad invited me to attend a meeting on 24th and 25th October. Mr. Prasad was in charge of a survey to clarify the situation of radiotherapy in Africa. Staff from the IAEA and 2 representatives attended this meeting. The object of this meeting was to shed light on the problems associated with collecting correct data and to find a solution. I could see how difficult it is to contact and collect accurate information or answers from centres in Africa. After the meeting, I also worked on transforming the answers into a form of useful data. I did not finish collecting answer sheets, so I submitted the data sheet only with the answer sheets that I had. I hope as many centres recognised as possible will answer and cooperate on this survey.

vi. Participating in AFRONET

Many radiation therapy departments in Africa were isolated geologically. Radiation oncologists working in such centres do not have enough colleagues to discuss with or ask advice from regarding diagnosis to post-operation. The object of the AFRONET is to provide a place for isolated doctors to discuss with other professionals. The AFRONET is held once a month to discuss some cases for which participants wanted to hear the opinions of others. I attended 3 times, 2 of these 3 were with cases and, for the last AFRONET, there was no case submitted so Mr. Rubio did a presentation about brachytherapy. A participant does a presentation about a case submitted usually with paper evidence and then a discussion follows. I could see how important having a place for discussion is and AFRONET worked very well as such a place.

vii. Participating in section meetings

The ARBR has a section meeting every 2 weeks. During my internship, it was rare that every staff could gather in one place because staffs had to go abroad for their work. So I was only able to attend 2 section meetings. In the section meetings, all the members shared each other's work and discussed future plans. The ARBR will hold an international conference in June 2016, the "International Conference on Advances in Radiation Oncology" (ICARO2), so I could see what the preparation is and obviously staff got busier as the days passed.



viii. Making SharePoint for a lecture course

Mr. Belyakov provides a lecture course on the internet with contributors outside of the IAEA. He tried to make another renewed course, and I partly helped to make it. SharePoint can be used to make a webpage with the system allowing to choose visitors of the webpage. Mr. Belyakov is the first person who adopted SharePoint in the section. After being introduced at a section meeting, some had an interest in the system and other staff will start to consider using it. (E.g. after the workshop written below, after the meeting with Latin American countries.)

ix. Helping to manage a workshop

There was a workshop hosted by Ms. Fidarova, “Workshop on Status and Quality of Radiotherapy Services in the former USSR Countries” held from 19/12/2016-21/12/2016. The representatives were from Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Republic of Moldova, Russian Federation, Tajikistan, Ukraine, and Uzbekistan. As a preparation, I helped to make a ppt. for the survey. The presentation had a meaning as some feedback or premier of the survey. This workshop can be said as one of influence or results the survey gave and I was very glad I could be involved in such a great presentation. During the workshop, I collected all the presentation showed and made a webpage (SharePoint) for sharing them with all the participants. In the workshop, there were presentations mainly from the IAEA. I learned about each service and collaborating work the IAEA provided. Also 3 presenters attended to present the ideal or example medical services system and to discuss it. I learned about know various medical systems in European countries.

x. Checking Japanese translations

The Division of Human Health published “Health in Disasters Handbook: A Science and Technology Studies Practicum for Medical Students and Healthcare Professionals”. The original version was written in English and the IAEA is planning to publish the book translated in Japanese. There was already a book translated completely, but Mr. Scholz, who is in charge of publishing this book, wanted another opinion about the translation. I read the book and highlighted some parts that I found could be improved. Changing the translation directly could make differences with what the book would want to say originally, and that is why we chose this way of correction. Mr. Scholz wanted as many people as possible to read and understand the content of this book. So I just focused on whether the Japanese in this book was natural or not. The translation was almost perfect and the content was so interesting for me because it focuses on medical professionals in many chapters. I could not finish all the checking, so submitted only the parts I did and left some comments for Mr. Scholz.

xi. Helping to write a paper

I asked Ms. Abdel-Wahab to give me some kind of tasks. Considering that I am interested in disease and treatment for Head & Neck, she gave me an opportunity to help her paper with research finished but written content incomplete. The research focused on the relation between radiotherapy techniques and their side effects in the treatment for Head & Neck diseases. There were difficulties for me to understand the outcome because I was involved after the research was finished and did not have actual experience with cases. But Ms. Abdel-Wahab was patiently trying to understand the questions I had and leave me to do as much as I could do.

xii. Collecting county data for updating DIRAC

To find geological inequity for radiation therapy provided in the United States, I collected some data on the US. The IAEA provides database - The Directory of Radiotherapy Centres- and there was no information more specific than states except centres in large cities. I collected county and city data (population, land area, total area) from the 2010 Census and the database was updated with that information. I could not finish clearing the situation of radiotherapy in the US, but I left the work I did and hope someone else will use it with the 2015 Census.

xiii. Finding a failure in module

There are many lectures on the Internet which the IAEA provides (NUCLEUS). The ARBR also provides lectures as well. There was a comment from a student that the certification system does not work well and he could not get it when he finished. So I tried to find what the problem in the lecture was by taking the lecture course. We were able to find a possible failure in the system and also some solutions. However the solution could not be achieved by an intern. It was beyond my responsibility, so I just left the rest of the work to other staff. Though the task could not be finished, I was able to learn a lot about radiation physics and biology from the lecture course during the process of finding a reason for the malfunction.

xiv. Collecting references by using EndNote

EndNote was adopted for writing papers. I have never experienced writing a paper, so under instruction from Mr. Belyakov, I collected references for some papers. The way the system works was a little too difficult for me, but I think it was a good experience for my future work.

xv. Collecting data about small countries and SIDS

Mr. Rubio worked for a project with Small Island Developing States (SIDS) and many members of the SIDS were also involved in the small countries initiative. A small country is a country whose population is under 1 million. So I collected the data, especially population, from DataBank and made an Excel sheet with information on participation in the UN, SIDS and Small Countries Initiative.

In VIC, there are many conferences every day. What interested me besides the tasks written above was a conference with Latin American countries. All the participants talked in Spanish. I thought a regional conference would be very useful as a first step. Because forcing participants or people who needed help from the international organization could be a huge difficulty for them and prevent them from contacting the organization. I felt that not only English but also other languages popular in particular regions are also useful especially for the first stage that involves forming relations with each other.

Conclusion

Through the tasks and works during the internship, I was able to experience a lot and learn a great deal whether directly or indirectly. Directly, I had academic experiences especially relating to medicine, writing a paper, doing a survey, etc. Indirectly, I could see the attitude and ideas of working as a professional, talking with people who have a passion for their own job. All the people working there are willing to help others. They try to share the knowledge or experience and do something needed that has never been done. I also was blessed with their minds. They let me get involved in their ongoing project without hesitation. I cannot show my appreciation for them and for that opportunity enough. And I would also like to thank the people at the Hiroshima prefecture centre and Hiroshima University for giving me this opportunity.



(With all the staff in the ARBR section except J.S.Gage or U.Monks)