BIOM9420 CLINICAL LABORATORY SCIENCE 2019 – WEEK 6 – TUTORIAL ON MEDICAL IMAGING

In the lecture this afternoon, you were introduced to five most common imaging modalities (X-ray, CT, MRI, Ultrasound and Nuclear Imaging) used in Medicine today. A key aspect of the clinical and technical science behind medical imaging is being able to present both clinical information, as a responsible clinician, and technical information, as a responsible engineer, to a well-informed member of the public. To do this effectively, the most important point to keep in mind is to ensure that explanations and arguments in the presentation are made short, sharp and simple to understand, without "going around in circles". As you all will no doubt in time become responsible engineers, your task today is to present key technical information about one of the five imaging modalities in no more than 5 mins to the rest of your class.

To enable smooth logistics for the running of this task, each of you will be assigned to one of five groups. Each group will randomly be assigned to one imaging modality by the tutor. Your task as a group is to research key technical information about this imaging modality using both the lecture slides as well as other online resources, prepare a short presentation (use PowerPoint and/or your imagination) and deliver the presentation. You will be given a maximum of 30 mins for preparation and a maximum of 5 mins for the presentation.

Your presentation must include enough detail to cover all aspects about the assigned imaging modality. These include the principles of physics behind the imaging technique, any key technical information about the "machine" used, the various applications where the imaging technique would be useful, the contraindications for the imaging technique (i.e. in what cases would you not use it) and any other interesting information about the technique that has been published in the public domain in recent times.

The primary goal of your presentation should be that each one of your audience members after having heard all presentations becomes "well-informed" about all five imaging modalities and they in turn should be able to explain it to anybody as a responsible engineer!

Good Luck!