

Proton Workshop at Saturday Morning (01/26/2019)

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This interactive workshop will cover the whole proton treatment workflow in hands-on demonstration from seven modules in a real clinic environment. Each module is one hour long and attendees may select the top four modules that interest them most.

- **Module 1** (CT sim and immobilization)
Rooms CC415 and CC432 (concourse level)
 - Demo in a CT simulation room on how to immobilize patient during CT sim for breast, prostate, H&N and brain cancers.
 - Experienced faculty to share their experience on how to reduce uncertainty in patient CT simulation and immobilization.
- **Module 2** (Treatment planning and plan evaluations for breast cancer)
Room CC363 (concourse level)
 - Module is based on representative cases for breast cancer. Demo in a treatment planning system.
 - Module will cover planning related topics: margin expansions, beam angle selections, optimization technique (SFO/MFO, robust optimization), challenges in the planning process (e.g. which target is always hard to spare), plan robustness and LET evaluation, verification CT, what proton PBS plan can usually achieve for the breast cancer, and how to handle breast implant/expander in proton therapy.
- **Module 3** (Treatment planning and plan evaluations for prostate cancer) **Room CC377 (concourse level)**
 - Module is based on representative cases for prostate cancer. Demo in a treatment planning system.
 - Module will cover planning related topics: margin expansions, beam angle selections, optimization technique (SFO, robust optimization), challenges in the planning process (e.g. which target is always hard to spare), plan robustness and LET evaluation, what is the most dosimetric benefits of PBS as compared to IMRT or proton passive scattering.
- **Module 4** (Treatment planning and plan evaluations for H&N cancer)
Room 1-844 (first floor)
 - Module is based on representative cases for H&N cancers. Demo in a treatment planning system.
 - Module will cover planning related topics: margin expansions, beam angle selections, optimization technique (SFO/MFO/IFSO, robust optimization), challenges in the planning process (e.g. which target is always hard to spare), plan robustness and LET evaluation, verification CT, what proton PBS plan can usually achieve for the H&N cancer.

- **Module 5** (Treatment planning and plan evaluations for brain cancer)
Room 1-846 (first floor)
 - Module is based on representative cases for brain cancers. Demo in a treatment planning system.
 - Module will cover planning related topics: margin expansions, beam angle selections, optimization technique (SFO, robust optimization), challenges in the planning process (e.g. which target is always hard to spare), plan robustness and LET evaluation, what proton PBS plan can usually achieve for brain cancer.
- **Module 6** (IGRT and treatment delivery)
Gantry 1 and 2 (concourse level)
 - Phantom based IGRT and treatment delivery demo for breast, prostate, H&N and brain cancers in proton treatment gantries.
 - Experienced faculty to share their experience on how to setup these patients and reduce uncertainties during patient treatment.
- **Module 7** (Comprehensive QA)
Gantry 3 and 4 (concourse level)
 - QA demo in proton treatment gantries
 - Very fast and accurate daily QA that only takes 10 minutes
 - Comprehensive monthly QA for proton range, spot position and spot sizes
 - Highly efficient patient specific QA by extensive automation

<https://ce.mayo.edu/content/practical-proton-therapy-workshop-2019-module-selections>