Intro to Brain Metastases
- Brain metastases are the most common type intracranial tumor in adults, occurring in 20-40% of patients with cancer.
- Due to the presence of the blood brain barrier, chemotherapy is often not an effective treatment option for brain metastases.
- Patients who present with brain metastasis may have headaches, nausea, vomiting, focal weakness, seizures, or cognitive changes. Patients may also be asymptomatic.
- The median survival for untreated brain metastasis is only 1-2 months, but this can be improved if further treatment is an option.

Intro to Whole Brain Radiation (WBRT) for Brain Metastases
- Goals of WBRT: to prevent further growth of brain metastases, and therefore maintain neurological function and quality of life, and to potentially improve survival.
- WBRT is typically given in five or ten treatments (depending on performance status), Monday to Friday, with no treatment on weekends or holidays.
- A 'shell' will be made for each patient at their simulation CT appointment prior to starting WBRT. Made of thin, waffled plastic, it is warmed and stretched over their head to create a mould that will be used each day for treatment. It does not hurt, although some patients have issues with claustrophobia. This increases accuracy and removes the need to draw reference marks on the patient’s head and neck.
- The patient will not see or feel anything while receiving treatment.
- May patients will be on dexamethasone during radiotherapy to control intracerebral edema from brain metastases, which can be temporarily exacerbated by WBRT. This is followed by a dexamethasone taper at the completion of WBRT.

Side Effects
- Fatigue: common to all patients receiving radiation (curative or palliative)
- Skin redness, itchiness, and flaking over the scalp
- Hair loss over the scalp: hair will usually grow back within several months
- Less common: Headache, nausea, and vomiting (these symptoms can be controlled with steroids), serous otitis media (temporary decreased hearing)

Key Point
Any patient with a history of cancer presenting with headache, nausea/vomiting, seizures, or cognitive/motor disturbances should raise suspicions of brain metastases. An enhanced CT of the head or an MRI brain are the best choices for imaging.

Referral information
- The Palliative Radiation Oncology (PRO) Clinic offers palliative radiation for treatment of patients with bone/brain metastasis and a biopsy-proven primary cancer.
- Patients who are candidates for radiation will be seen in a comprehensive, multidisciplinary clinic with the intent of assessment and treatment on the same day.
- Multidisciplinary clinics are held weekly on Tuesday, Wednesday and Thursday.

To refer, email referral to acb.PROclinic.albertahealthservices.ca, or call 780-432-8771 and ask to speak with “PRO Triage”, for palliative RT. Referrals should include cancer histology, reason for referral, current imaging/staging workup.

PRO members are also available for CME events such as presentations.
Helpful References:
1. Palliative Care Tips, [www.palliative.org](http://www.palliative.org) FAQ’s on Radiotherapy.