

Palliative Radiotherapy



WINDSOR REGIONAL HOSPITAL CANCER
EDUCATION DAY

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DISCLOSURES:

No conflicts of interest/disclosures.

Overview

- Palliative radiotherapy: Basic Principles
- Reasonable Hope
- Indications for referral
- Case studies: Emergencies
- Radiation-Induced Side Effects
- Frequently Asked Questions

What is Palliative Radiotherapy?

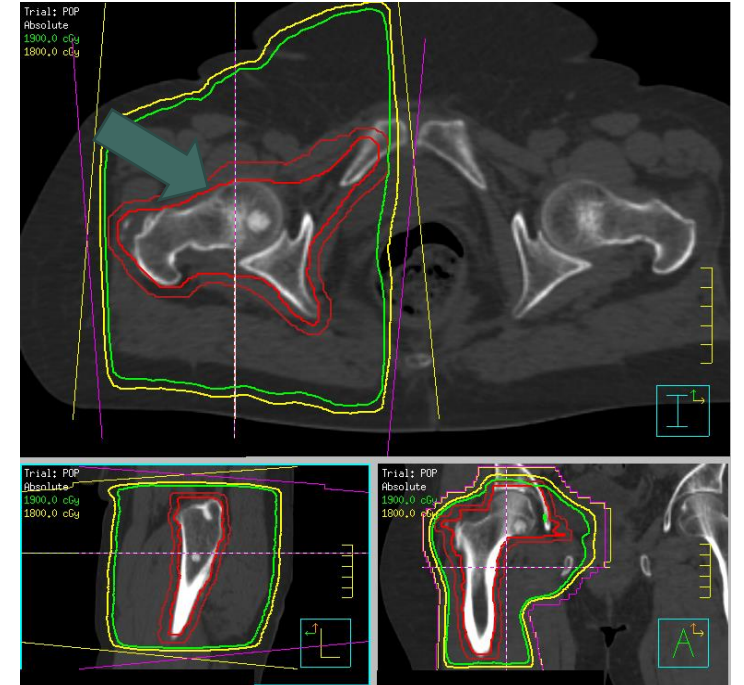
- Radiation treatment with the intent of managing symptoms
- NOT curative
- Radiation treatment courses involve:
 - Lower total dose
 - Larger daily dose
 - Shorter overall treatment time (generally 1,5 or 10 treatments)
 - Side effects are usually mild/moderate, peak 7 to 10 days post treatment, and then resolve

“So it won’t cure my cancer??”

- No, but we can help to identify, set and reach goals for improved symptom management.
- **Creating Reasonable Hope:**
 - directs our attention to what is within reach more than what may be desired but unattainable.
 - something we do, preferably with others.

Most Common Indications: Palliative Radiotherapy

- Bone Metastases
 - Most common indication for palliative RT
 - Can cause pain
 - Can put patient at risk of pathologic fracture
 - 70-80% of patients report significant improvement in pain after RT
- Single fraction or 5 fractions
 - Equal pain relief
 - Less retreatment with longer course
 - Depends on performance status of the patient



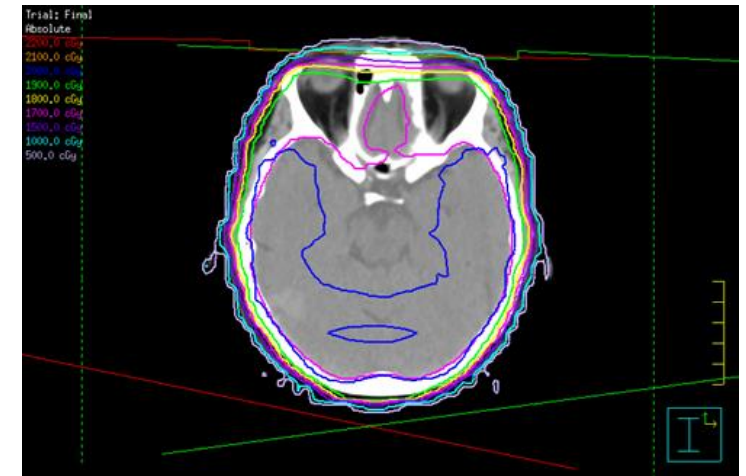
Brain Metastases

- Depending on the number and location of metastases present, can be treated with whole brain RT (WBRT) or stereotactic radiosurgery (SRS)
- Local control:
 - 60-70% WBRT
 - 80-90% SRS
- Distant brain control:
 - 40% -> 20%

SRS



WBRT



Thoracic Metastases

- Radiation can alleviate symptoms from:
 - Obstruction of the bronchus
 - can cause pneumonia
 - Hemoptysis
 - Hoarseness of voice due to compression of the laryngeal nerve
 - Superior vena cava compression (SVCO)
 - Dysphagia/odynophagia
 - From intrinsic or extrinsic compression of the esophagus

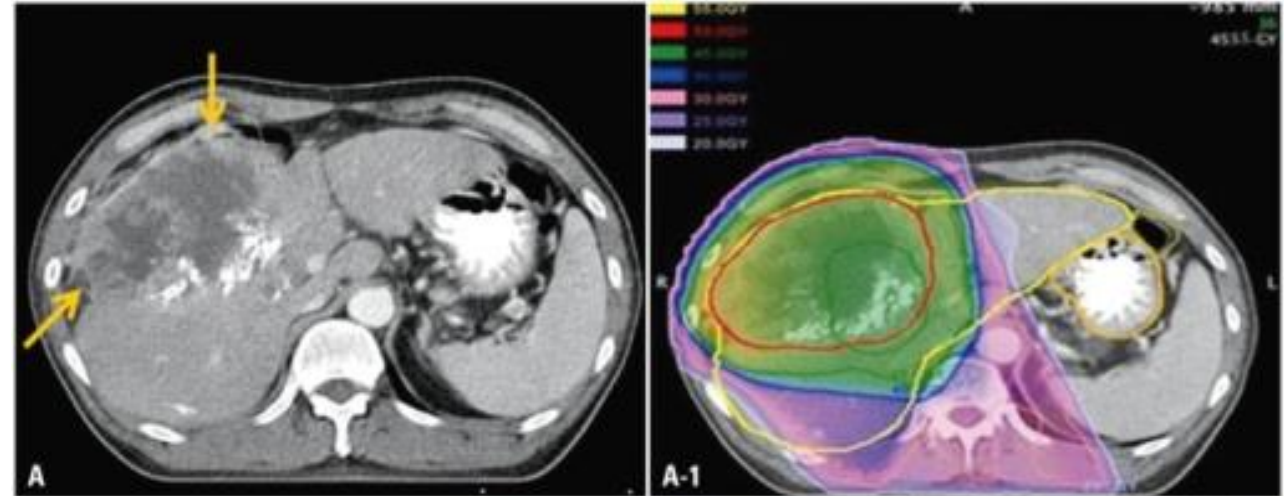
Thoracic Metastases

- 60-80% of patients report good symptomatic control with radiation treatment



Abdominal Radiation Treatment

- Can be used to treat liver pain
 - Due to mets on external capsule or putting pressure on the external capsule
 - Single dose
 - Can target entire or partial liver
 - 48% pain relief after RT
- Obstruction
- GI Bleeding
- Pain



Pelvic Radiation Treatment

- Gynecologic pain and bleeding
 - Hemostasis: 85-90%
 - Pain relief: 60-70%
- Inguinal/Pelvic lymphadenopathy
 - Can cause lymphedema of the lower extremities
 - 40-60% improvement, but can take several weeks post RT



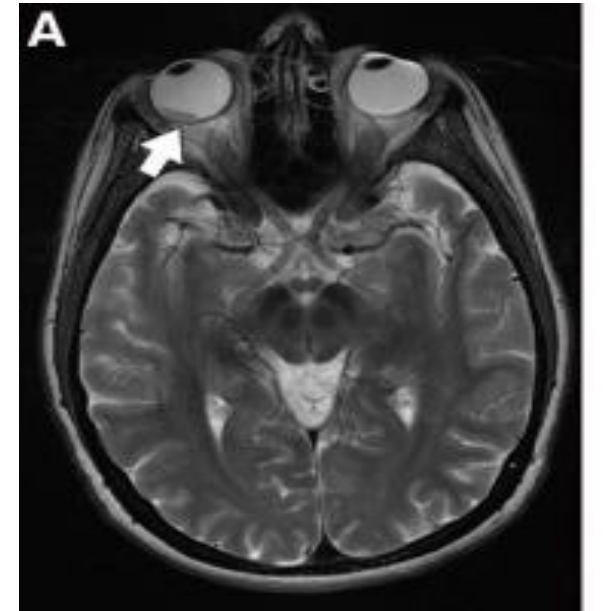
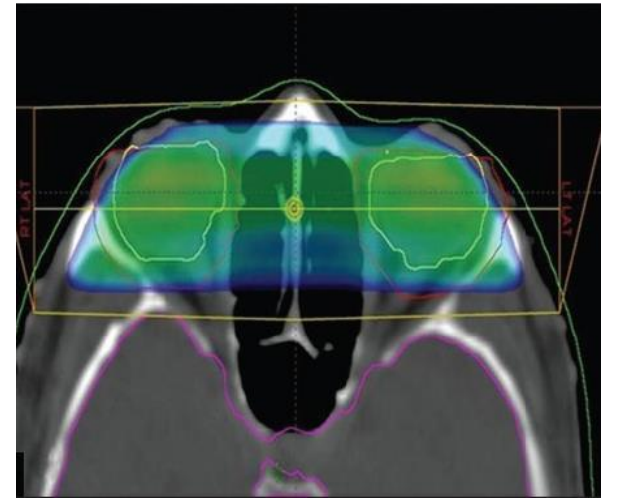
Radiation Treatment of the CNS

- Leptomeningeal disease
 - Disseminated vs discrete
 - Can cause pain
 - Need MRI with gad. to visualize; can be difficult to detect radiologically
 - RT can achieve pain relief in 60-70% of patients



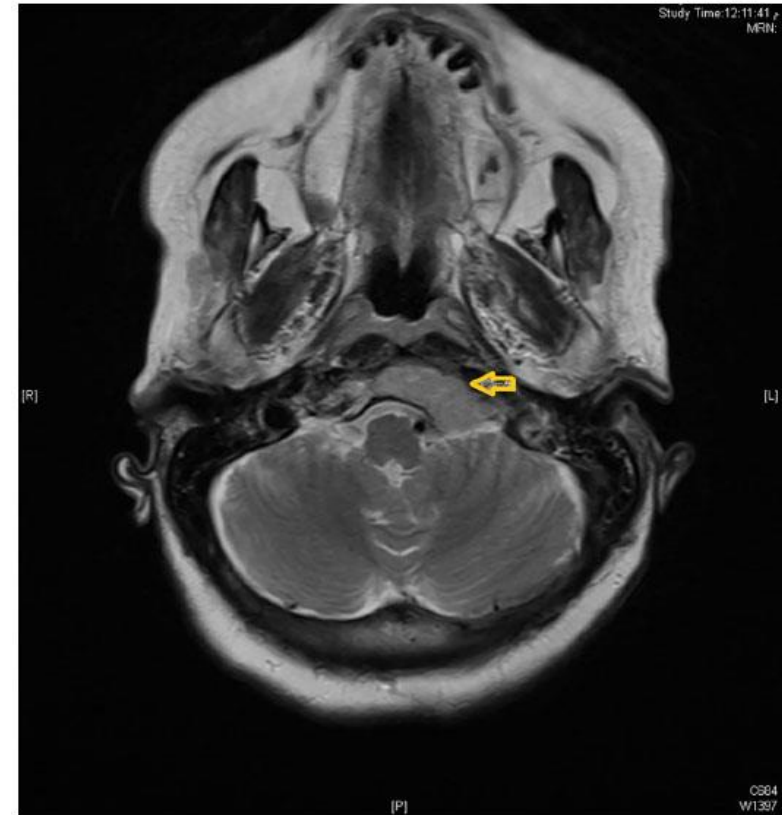
Radiation Treatment of the CNS

- Choroidal metastases
 - Causes **rapid** vision loss
 - *Urgent referral to ophthalmology to perform focused exam
 - Timeline to complete loss of vision approx. 2 weeks without RT
- Outcomes:
 - 50-60% of patients report stable vision post RT



Radiation Treatment of the CNS

- Disease at base of skull
 - Can present with cranial nerve deficits
 - Often very symptomatic
 - Symptoms stabilized in 70-80% of patients post RT



Radiation Treatment of Skin

- Cutaneous lesions
 - Can ulcerate and cause pain
 - 60-70% improvement in symptoms with RT
 - Complete resolution of lesion in approx. 20-40% of patients



Case Study: Spinal Cord Compression

- 85 year old male with existing diagnosis of metastatic adenocarcinoma of the prostate.
- Presents to ER with 4-6 week history of worsening mid-back pain and leg weakness.
- MRI detects spinal cord compression in T spine.
- Multiple comorbidities-not a surgical candidate.
- Urgent Referral Received at 8am.



The Day's Events:

- Urgent Referral reviewed by RO and pt booked into Rapid Response Clinic for same day at 10am.
- 10AM
 - Pt arrives to clinic as inpatient from nearby hospital
 - Consult completed
 - Informed consent obtained for 20 Gy in 5 treatments to T Spine
- 11AM
 - Pt has CT Simulation
- 11:30AM
 - RO/APRT delineates contours and
 - Radiation Therapist designs treatment plan
- 12:30PM
 - Quality assurance checks and review
- 2PM
 - Pt receives first radiation treatment
- 2:30PM
 - Pt departs from Southlake to return to sending hospital.



Case Study: Painful Bone Metastases

- Metastatic adenocarcinoma of the lung with biopsy proven metastases to liver.
- Recent radiographic evidence of bone metastases established in May 2017.
- EGFR mutation positive with exon 19 deletion.
- Currently on afatinib 20 mg continuous daily.
- 10-12 month history of increasing right hip pain, now severe, interfering with ADLs.

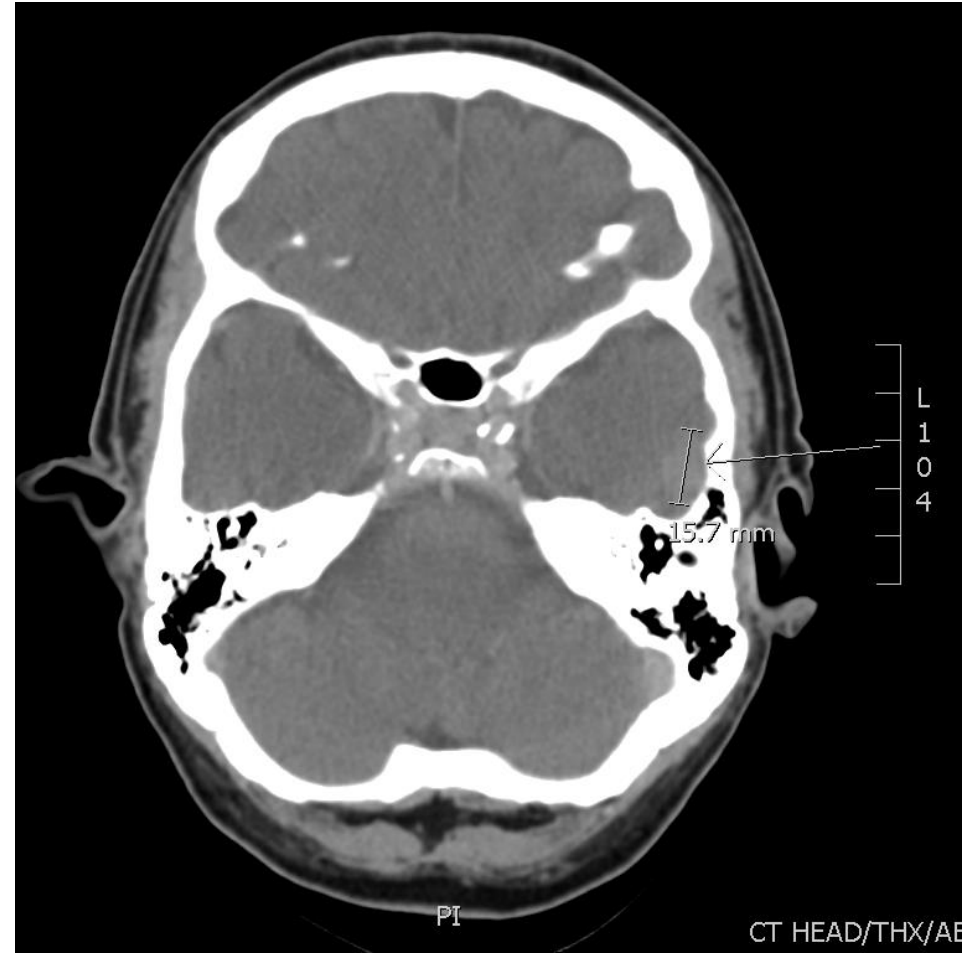
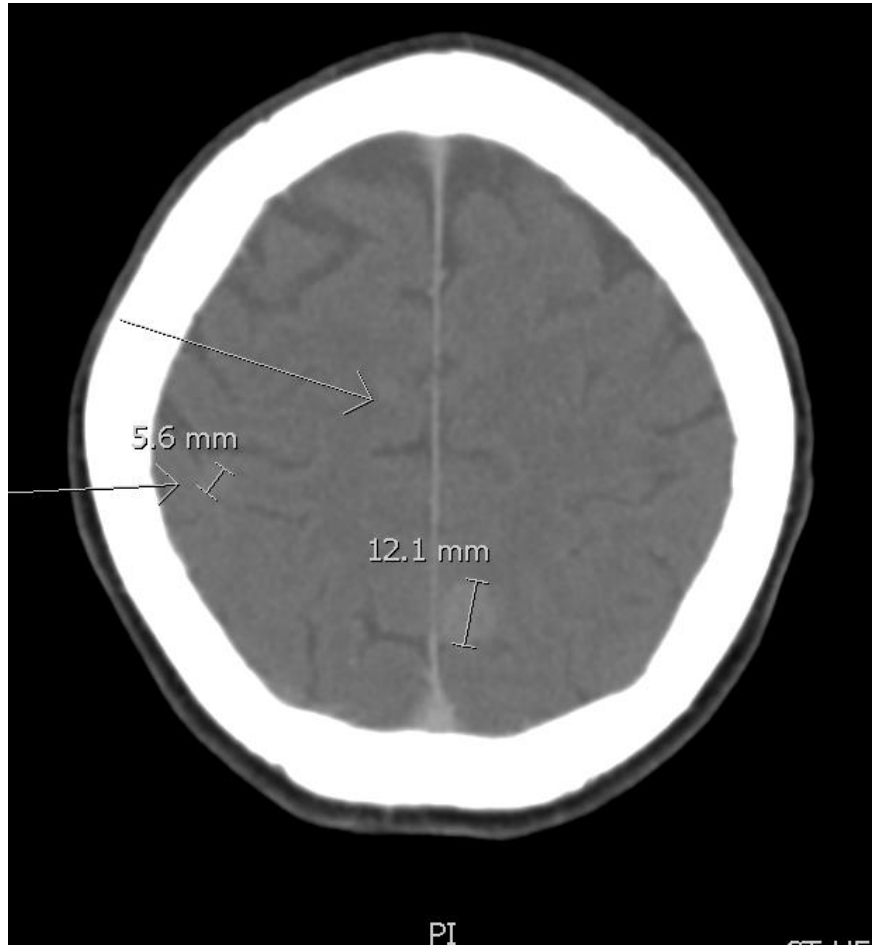
Patient Pathway:

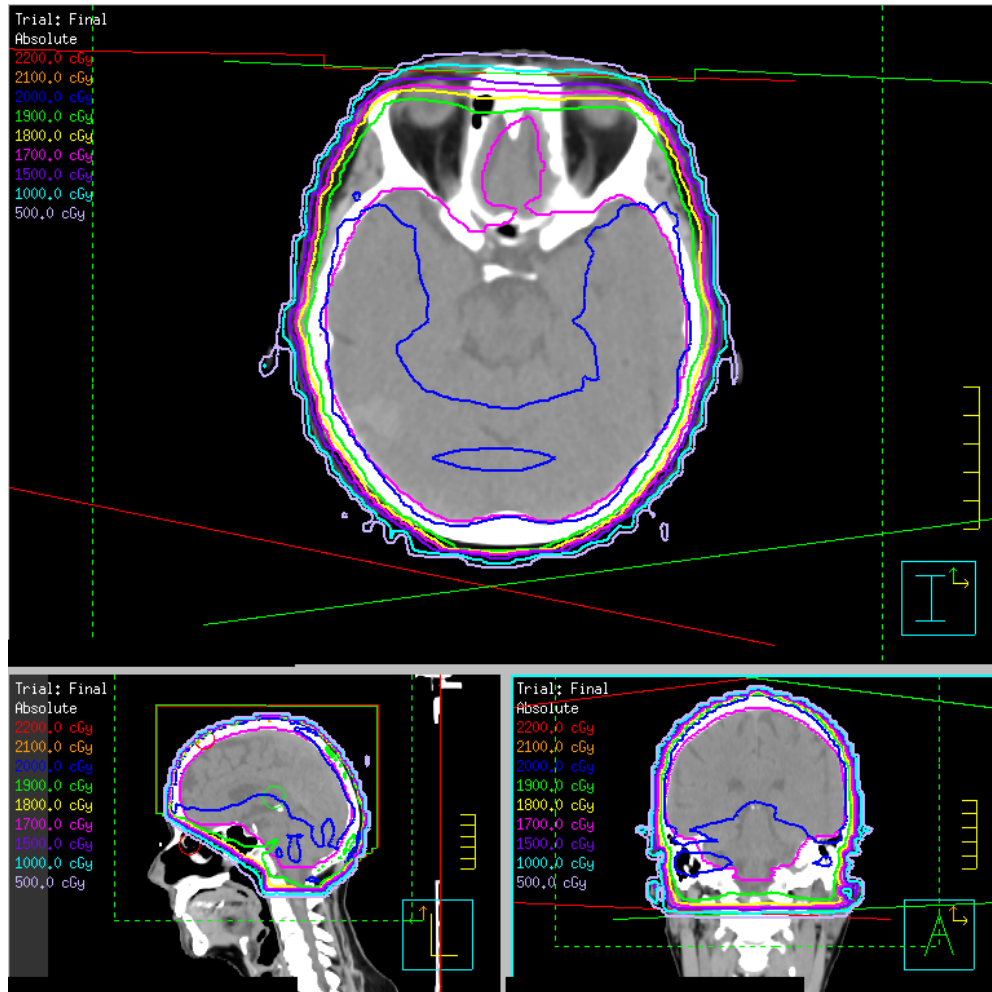


- Urgent Referral reviewed by RO, booked into Rapid Response Clinic for next day.
- Consult, 10AM:
 - History, physical exam
 - Informed consent obtained for 5 treatments to right hip
- Same Day:
 - Pt has CT Simulation
 - Targets delineated, Custom treatment plan designed
- Next Day:
 - Pt starts treatment
 - Complete resolution of pain 4 weeks after RT

Case Study: Brain Metastases

- Small-cell lung cancer.
- 2-4 month history of headaches.
- Started on cisplatin and etoposide, but shortly thereafter, switched to cisplatin, irinotecan (had an anaphylactic reaction to etoposide).
- Required dose reduction of the cisplatin owing to renal toxicity.
- Completed her chemotherapy two months ago, but now has progressive disease with multiple brain metastases.



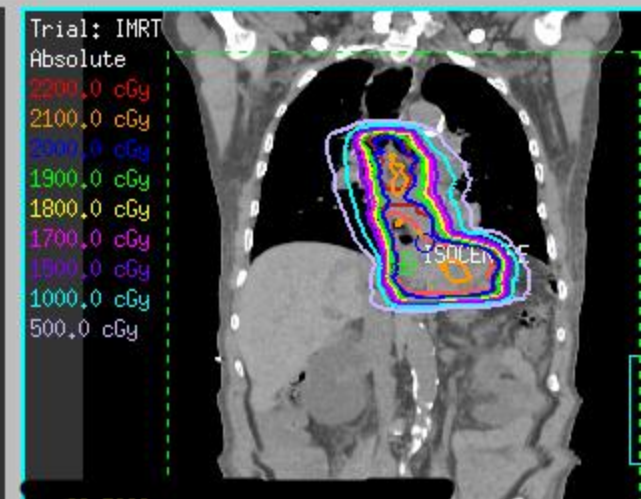
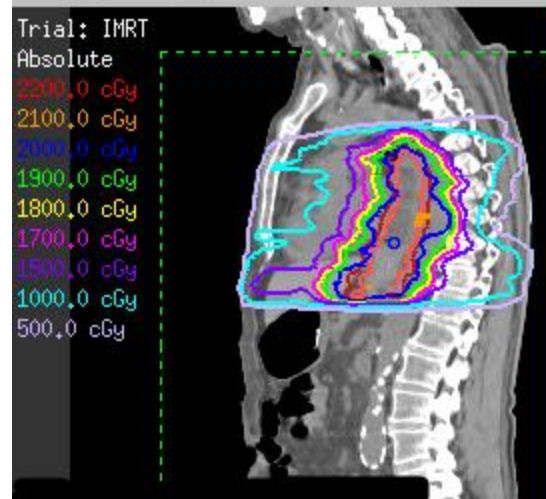
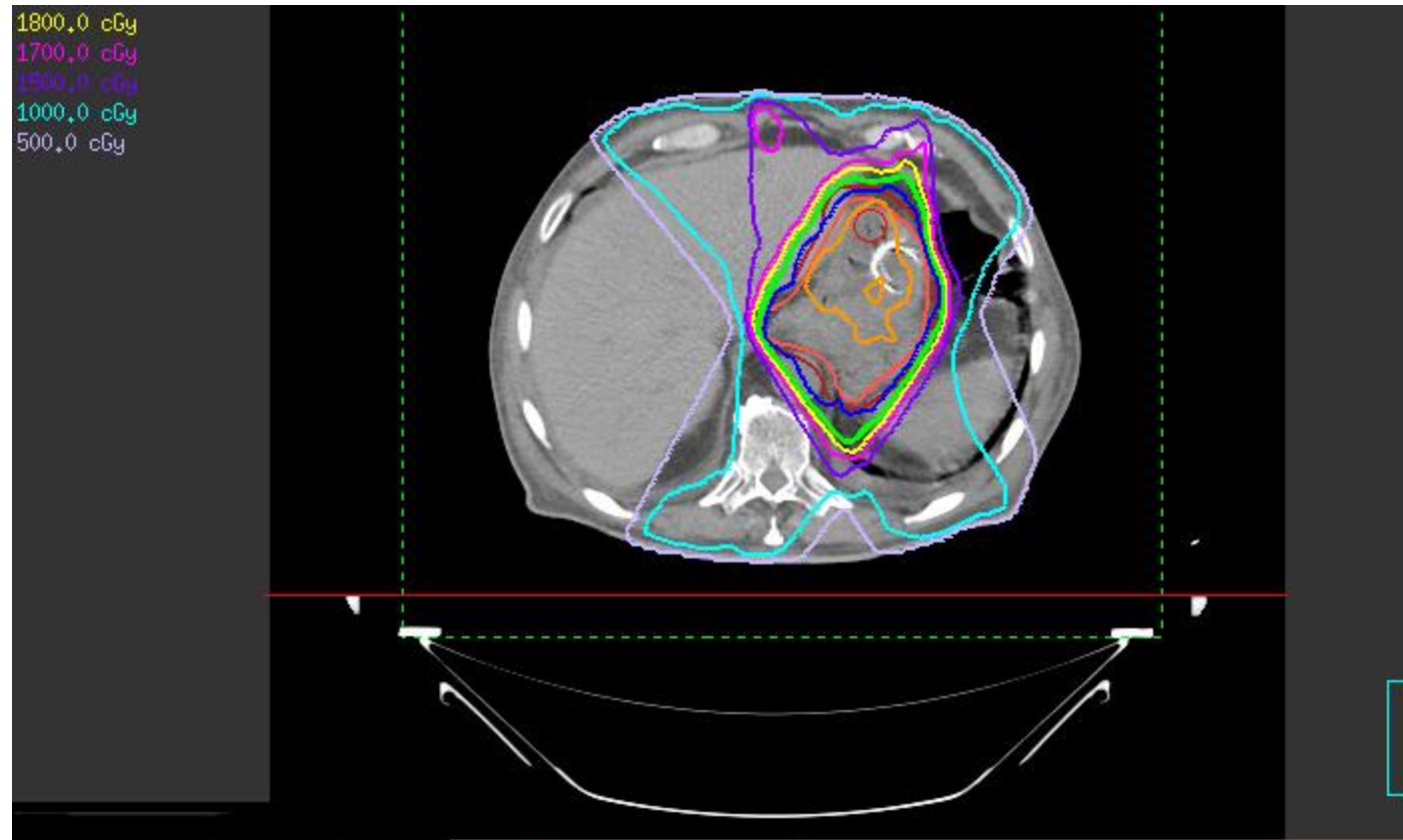


- Urgent Referral reviewed by RO on Tuesday, booked into Rapid Response Clinic for Wednesday AM.
- Consult, 9AM:
 - History, physical exam
 - Informed consent obtained for 20Gy in 5 treatments to the whole brain
 - Patient started on Dexamethasone due to significant edema
- 10AM
 - CT Simulation, Treatment Planning
- Next Day:
 - Pt starts treatment

Case Study: Bleeding

- 64 y.o. male, Her2 positive adenocarcinoma of the cardia, presented with anemia
- Discussed at multidisciplinary rounds: not a surgical candidate
- Developed dysphagia in May 2018; stent inserted
- Had episode of melena, then hematemesis
- Approx. 1L bright red blood brought up, requiring ICU admission and intubation
- Hemoglobin was:
 - 85 on Dec. 9th
 - 72 on Dec. 20th
 - 74 on Dec. 22nd
- Upper scope on Dec 20th:
 - identified significant tumor and clots in the distal esophagus and cardia, active spurting was seen in the cardia and was clipped with good hemostasis, but then further oozing, hemospray not effective

- Pt consented for 20Gy in 5 fractions to esophagus & GE Junction



Outcomes:

Hemoglobin stabilised:

70 on Dec 24th

96 on Dec 25th

Hemoglobin still holding a month later:

110 on Jan. 26th

No further melena or hematemesis

Radiation Symptom Management:

- Common for side effects to peak 7-10 days after treatment is complete.
- Side effects generally mild for palliative doses.
- Other than fatigue, side effects are localized to the treated area(s).
- Resolution of side effects can take a few weeks.
- Improvements in pain levels also takes a few weeks.

Frequently Asked Questions from Patients:

- Can you treat the same area more than once?
- How long does the radiation work for?
- Is it safe to have just one treatment?
- Does it matter if I miss a treatment?
- Am I radioactive after treatment?
- Are my tattoos permanent?
- Can you irradiate all of my “spots”?

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