

PALLIATIVE CARE TIPS

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Radiotherapy in Palliative Care: FAQ's on Radiotherapy

How Does it Work?

- Radiotherapy (RT) mechanism is that of differential recovery from cellular DNA damage (normal cells recover more quickly than tumour cells)
- If damage to tumour cells accumulates with repeated treatments past a certain point, they will no longer be able to reproduce and will die

What are They Talking About? What is the Process?

- Radiotherapy aka radiation aka irradiation aka radiation therapy
- Each radiation treatment = one fraction
- The time that the RT machine is turned on to give one fraction is ~5-10 minutes
- The total time a typical patient is in the building is ~30-60 minutes per fraction
- RT can't be seen or felt; it is like having an x-ray every day
- RT unit of dose = Gray (Gy), where 100cGy = 1 Gy
 - The old term is rad where 1 rad = 1cGy
- Patients may have to have an immobilization device constructed to control motion of a potentially moveable body part
 - ⇒ Eg someone receiving RT to their brain will often have a plastic 'shell' made, like a small, transparent hockey goalie mask, which then holds their head in the same position from fraction to fraction
- Typically one fraction is given per day on business days
- -But there are some situations that call for >1 fraction per day or treatment on weekends
- After consultation, the first step before treatment can start is simulation
 - ⇒ Simulation (or planning) is to specifically localize the tumour, to ensure that the high dose area is where we want it, and the normal tissue is spared as much as possible
- Then comes treatment planning & dose calculation, and then the RT can start

How is Palliative Treatment Different?

- ~50% of all radiation is given with palliative, versus curative, intent
- Aim: symptom relief, and therefore improved quality of life, with minimal treatment-related side effects and time commitment on the part of the patient
- RT given with palliative intent is usually of a lower total dose (TD), fewer number of fractions and larger dose per fraction than that given with curative intent
- This is for a few reasons:
 - Symptom relief is not necessarily dependent on total tumour kill so lower TD is sufficient
 - So acute side effects are less severe, which could otherwise impact quality of life
 - Smaller number of fractions is more convenient for the patient
 - Larger dose per fraction, which can be associated with late side effects, is less of a problem if someone is not expected to live long enough to be at risk for toxicity
- If someone has advanced incurable disease but is not currently having symptoms, RT may be deferred until such time as symptoms become bothersome
 - However there are certain indications for 'prophylactic' palliation, such as impending airway compromise or impending spinal cord compression

I've Heard That...Is it True?

1. Once a patient is treated with RT, they can never be re-treated to the same place.
 - This depends on previous treatment specifics. Someone previously treated with palliative intent may be able to be re-treated with palliative intent.
2. A patient must have severe symptoms before RT will be considered.
 - False: if patients are being bothered by a symptom, RT can be discussed.
3. Patients are radioactive after treatment.
 - False: patients are not dangerous to those around them after external beam RT (radiation from the outside)

What are the Contraindications?

- There are few contraindications to palliative RT and fewer still are absolute
- Eg Very poor functional status or inability to lie still would be problematic
- Maximum symptom relief can take 2-4 weeks, so patients should be reasonably expected to live long enough to gain some benefit

References

1. Palliative Care Tips, www.palliative.org, 'Radiotherapy for Bone Metastases & the RAPRP'.
2. Samant R, Gooi ACC. Radiotherapy basics for family physicians: Potent tool for symptom relief. Can Fam Physician 51:1496-1501, 2005.
3. Kirkbride P, Barton R. Palliative radiation therapy. J Pall Med 2(1):87-97, 1999.

REMEMBER: For referrals, questions, or telephone consultations call 496-1300 weekdays and weekends