

RADIATION ONCOLOGY: Techniques, Side Effects, and Oligometastases

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Overview



Technological advances in Radiotherapy

What that means for your patients

Resources for managing side effects

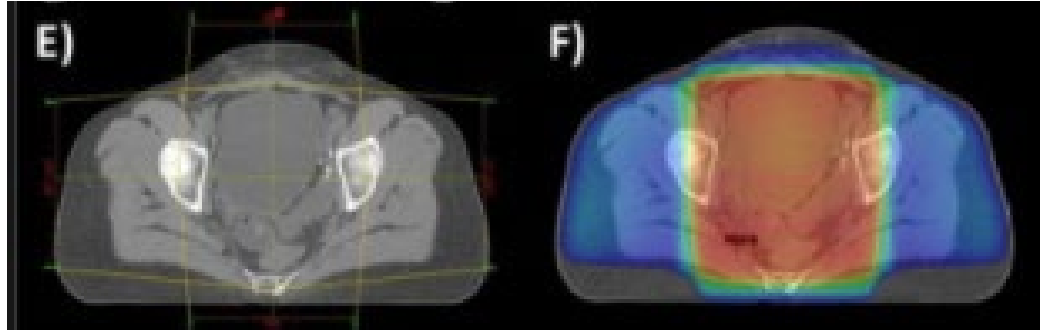
Cases

Technological Advances in Radiotherapy

2D Radiotherapy:

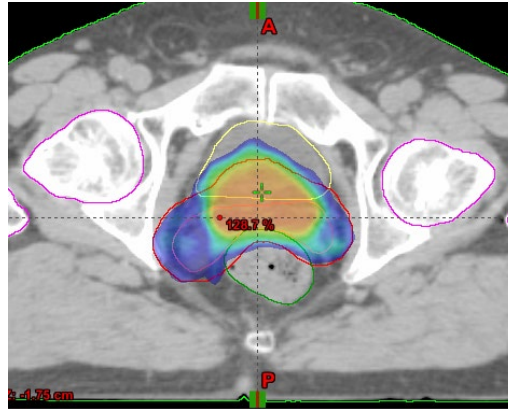


3D Radiotherapy:



Technological Advances in Radiotherapy

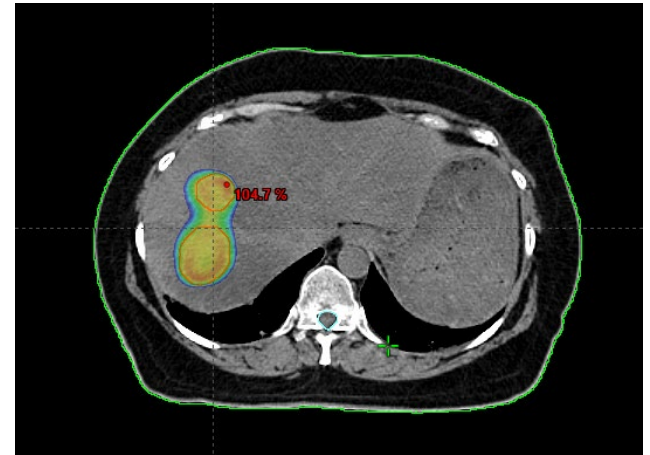
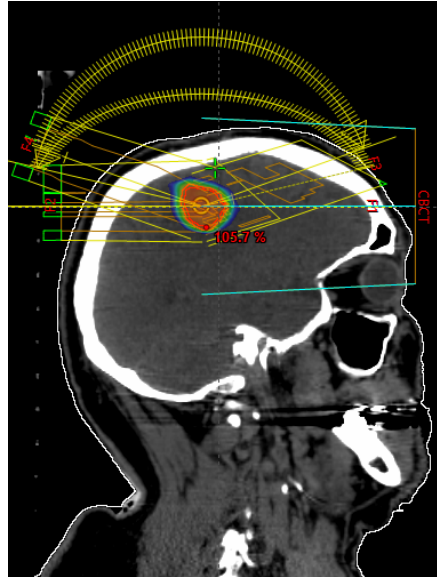
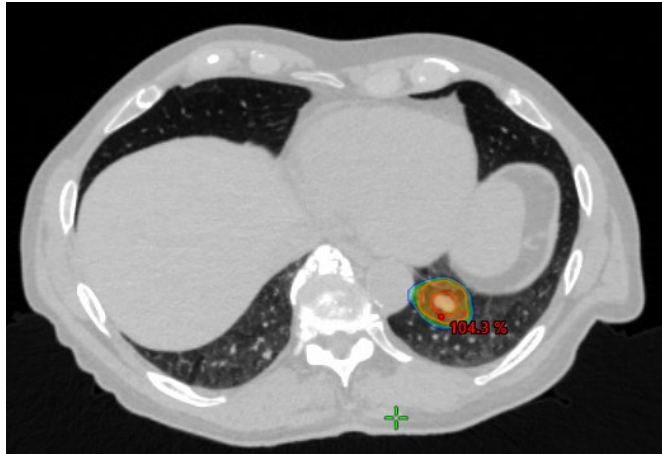
Intensity Modulated Radiotherapy (IMRT):



4D Radiotherapy:

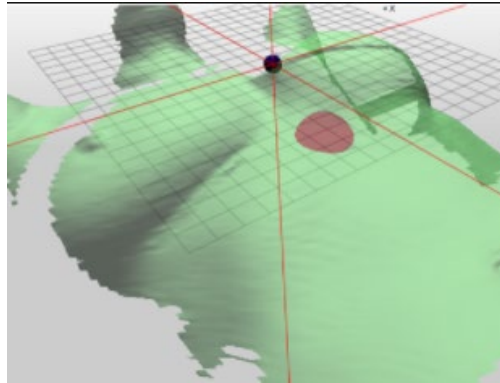


Stereotactic Radiotherapy:



Ultra-high doses
Precise delivery <1mm

Image-guided Radiotherapy: (IGRT)



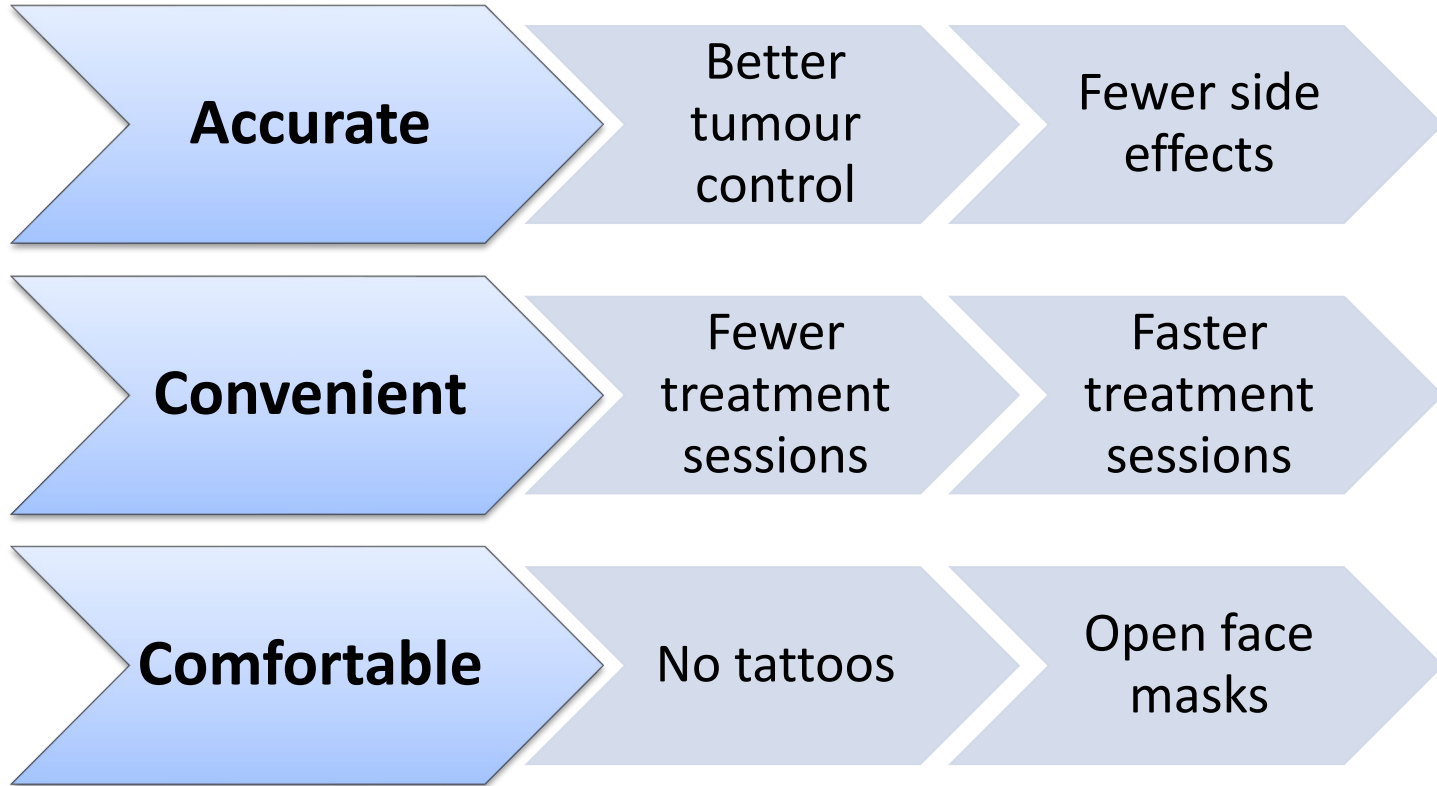
External
(Surface contour
and respiratory motion)



+ Internal
(CT fusion)

What does all of this mean for your patients?

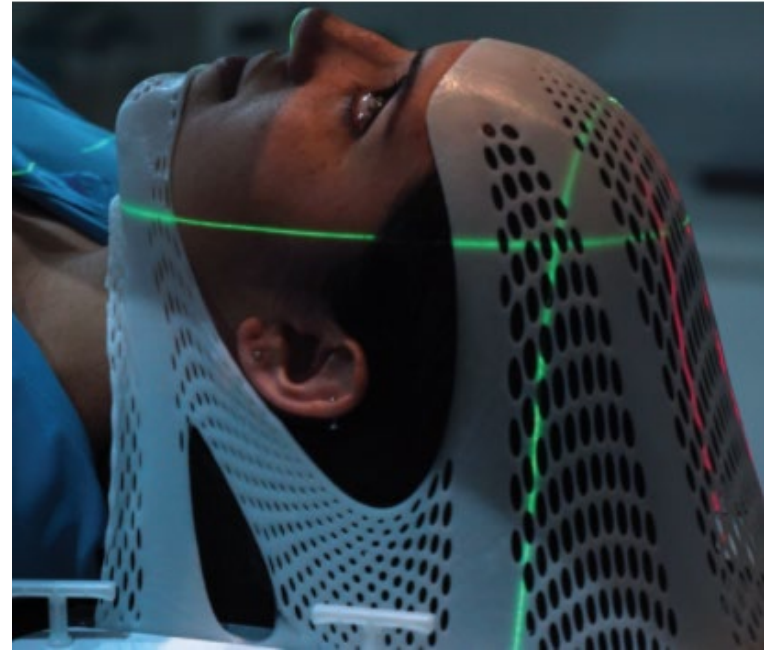
Treatments are Now More:





Surgical fixed frame
(with screws!)

vs



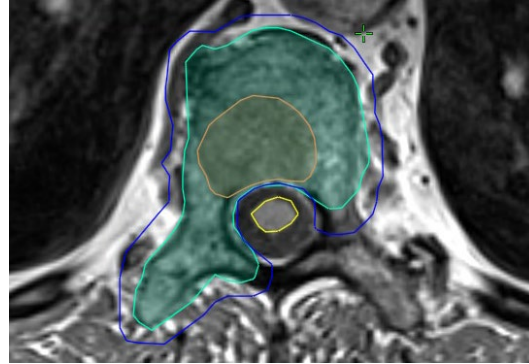
Non-invasive open face mask

What Can Patients Expect?

CT Simulation: Day 1



Design: Day 2-8



Begin Treatment: Day 9-10



What Can Patients Expect?

Side Effects: Related to treatment site and technique



Skin care:

Mild soap/baby shampoo

No wet shaving

E45/aveeno

Topical hydrocortisone if pruritic

Allevyn non-adhesive dressings if skin broken

Resources:

Cancer care team and nurse

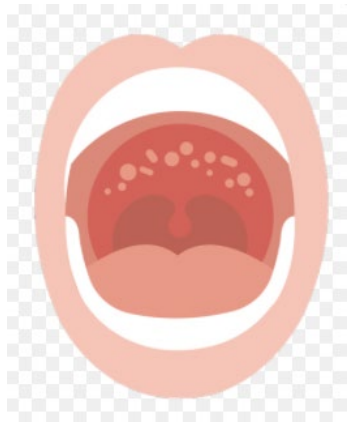
www.beaconhospital.ie/department-service/cancer-care

www.cancercareontario.ca/en/symptom-management

www.arccancersupport.ie

What Can Patients Expect?

Side Effects: Related to treatment site and technique



Oral mucositis:

Soft toothbrush

Regular sips of water

Sodium bicarbonate rinses (1 tsp in 1L water)

Mycostatin for fungal infection

BMX mouthwash (lignocaine)

Gelclair®

Resources:

Cancer care team and nurse

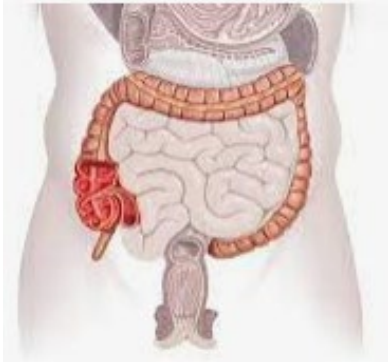
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What Can Patients Expect?

Side Effects: Related to treatment site and technique



GI (diarrhea/urgency):

Small, frequent meals

Limit caffeine, spicy foods, sorbitol (sugar-free gum etc), peeled fruits/veg

Anti-diarrheal

Proctitis: specialist care (consider suppositories containing hydrocort/5ASA)

Resources:

Cancer care team and nurse

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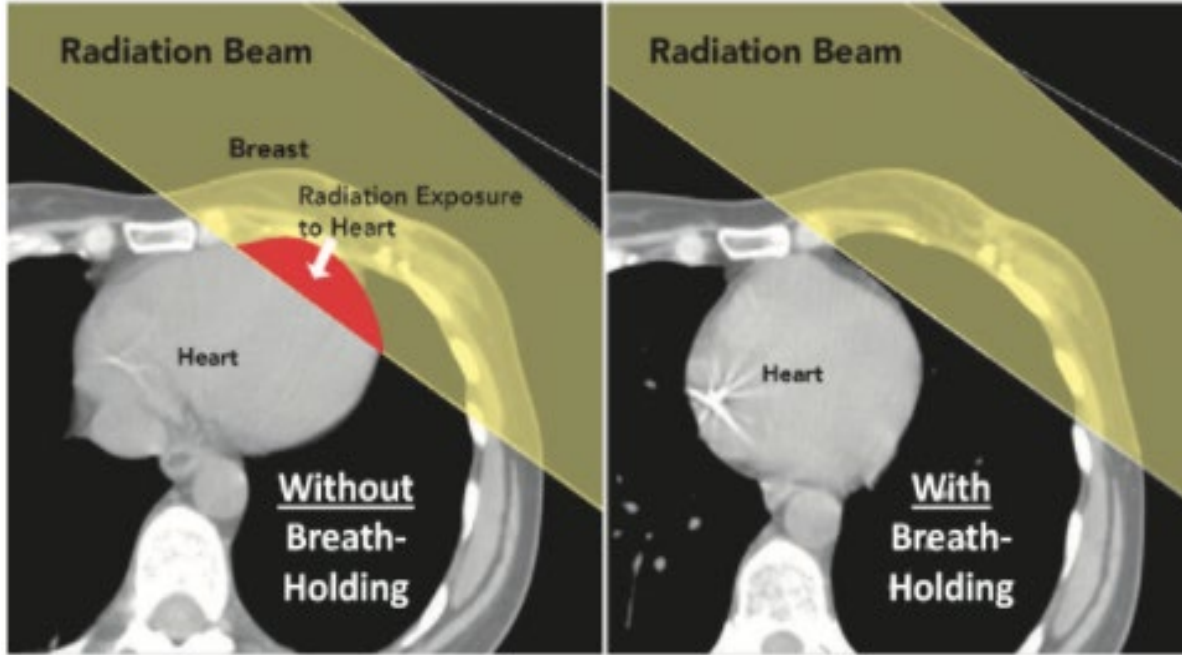
Case Examples:

Left sided breast cancer

Inoperable Early Stage Lung Cancer

Stereotactic Radiosurgery for Brain metastases

Case 1: Left Sided Breast Cancer



38yo

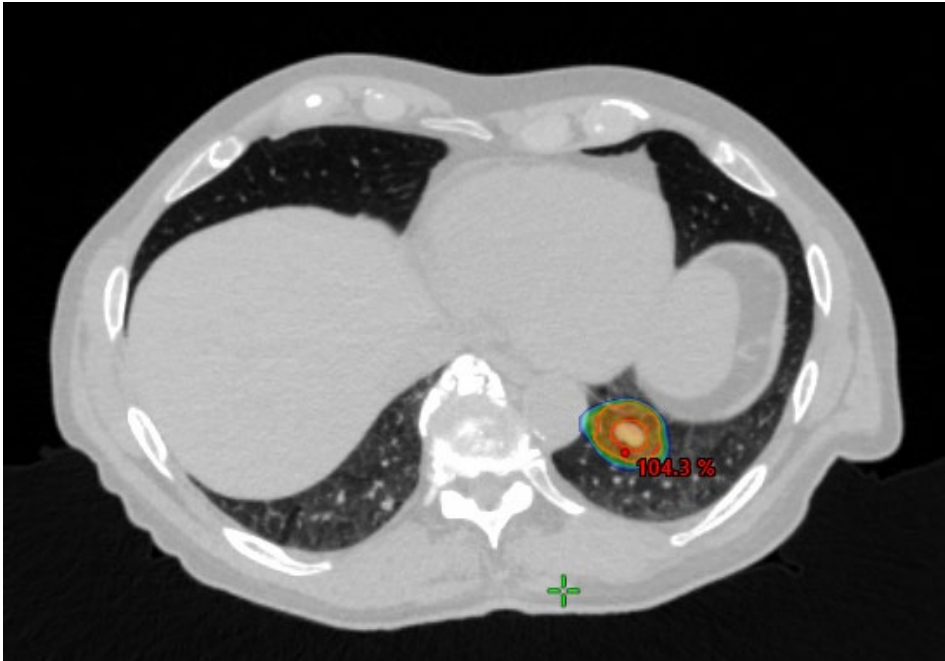
Stage I breast cancer

**Deep Inspiratory
Breath-hold**

Less cardiac exposure

Lower rates of
ischaemic heart
disease long term

Case 2: Inoperable Early Stage Lung Cancer



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Stage I adenocarcinoma

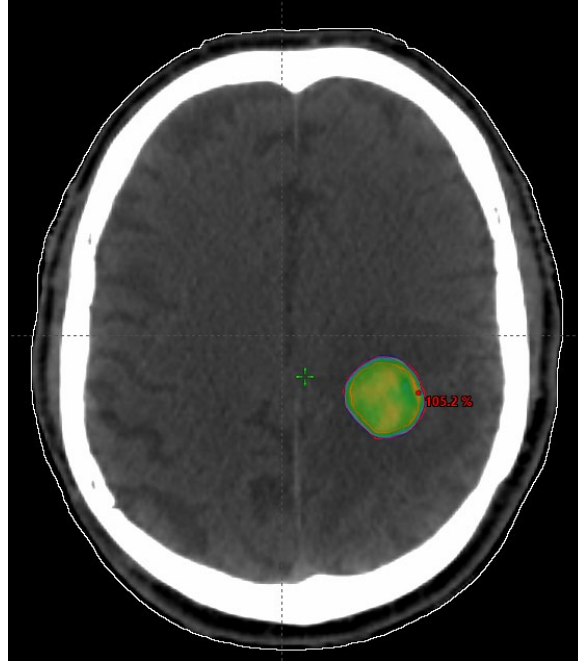
Multiple co-morbidities
Medically inoperable

5 fractions Stereotactic
Radiotherapy

Non-invasive, outpatient

Outcomes comparable to
surgery

Case 3: Stereotactic Radiosurgery for Brain Metastases



65yo

**Feb 2020: stage IV oesophageal ca
with 2 brain metastases**

Treatment combination:

Chemotherapy,

Stereotactic radiosurgery to brain
2020 and 2021,

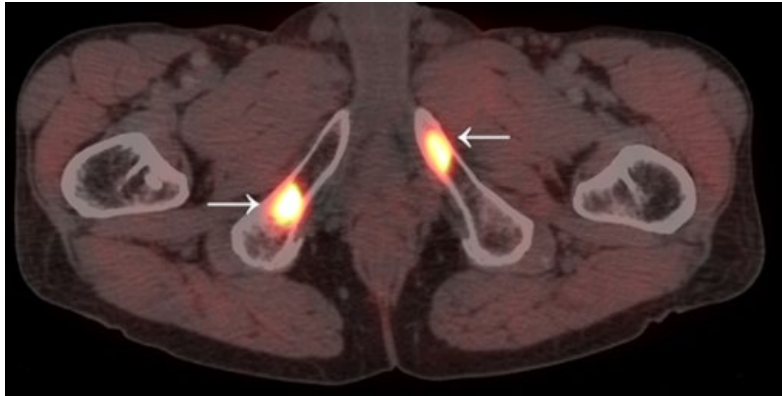
Radiotherapy to oesophagus 2021,

Stereotactic radiosurgery 2022

Still alive and active!

What are Oligometastases and why do they matter?

Possibility of Cure



Limited number of metastases (≤ 5)

All sites must be treatable with either stereotactic radiotherapy or surgery

Longer survival

Take Home Messages

**Technological
advances**

Impacts patient outcomes and experience

**Managing
side effects**

Practical approaches and resources

**Metastatic
disease**

Changing landscape and potential for
long term survival

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