What is Radiotherapy?
• Radiotherapy uses high-energy radiation to shrink tumours and kill cancer cells. X-rays, gamma rays and charged particles are types of radiation used for cancer treatment.
• The radiation may be delivered by a machine called a linear accelerator or LINAC (Figure 1). It sends high doses of radiation to the cancer cells while sparing normal tissue.
• About half of all cancer patients receive some type of radiotherapy sometime during the course of their treatment.

Why do patients receive radiotherapy?
• Radiotherapy is often given with curative intent (that is, with the hope that the treatment will cure a cancer, either by eliminating a tumour, preventing cancer recurrence or both).
• In such cases, radiotherapy may be used alone or in combination with surgery, chemotherapy, or both.
• Radiotherapy may also be given with palliative intent to relieve symptoms caused by cancer.

Why do we need masks for head & neck cancers?
• Radiotherapy is given in fractions (number of treatments). Fractionated treatment allows the normal tissue to repair in between treatments.
• Typically treatment can range from 1 to 35 treatments.
• During daily treatment, it is necessary to ensure that the patient will be in exactly the same position every day.
• Patients getting radiation to the head and neck area may need a mask.
• Masks are used:
  • to make it easier for a patient to stay still
  • to help keep the head from moving so that the patient is in the exact same position for each treatment
  • so any markings can be drawn on the mask, not their skin

How are the masks made?
• The flowchart below shows the steps involved in mask production.

1. The masks are made from a thermoplastic material (Figure 2)
2. The mask is heated in a 70 degree water bath for 3-5 minutes (Figure 3)
3. Excess moisture is removed by drying the mask using clean dry towel
4. The mask is placed over the patient and stretched downward slowly and evenly (Figure 4)
5. The mask is cooled by applying iced towels over mask

What is a Radiotherapy Mask?

How are the masks made....?

Figure 1: Linear accelerators are used to deliver radiotherapy

Figure 2: Unmoulded thermoplastic mask

Figure 3: Mask heated in a water bath

Figure 4: Mask moulded to the patient

Figure 5: Mask ready for treatment

What happens to the masks after treatment?
• All patient identifications and marks are removed from the mask at the end of treatment.
• Patients have the option to take the mask home.
• Traditionally if patients declined to take the mask home, the masks were disposed of as recycled material.
• More recently the masks are transformed into works of art as part of the Bravery Unmasked Program.

What is Bravery Unmasked?
• Bravery Unmasked was inspired by another program called Courage Unmasked Tennessee (www.courageunmaskedtn.org).
• The Assistant Director of Radiation Therapy (Mr Daniel Moretti) came across the Courage Unmasked Program on social media and together with the Director of Radiation Therapy (Mrs Lynette Cassapi) contacted Janet Heslep from the SWS Cancer Services Wellness Centre to initiate Bravery Unmasked.
• With the help of a creative arts therapy project in Liverpool and Campbelltown Cancer Therapy Centres, patients can decorate their masks and transform them into an art piece through Bravery Unmasked.

This poster was created by the Head & Neck Group, Liverpool & Macarthur Cancer Therapy Centres.