

Rhenium Skin Cancer Therapy

Radioisotope

Re-188, Rhenium-188
post-transition metals
 $T_{1/2}$: 16,9 h

Production

Tungsten/Rhenium Generator
W-188/Re-188

Radiation

Beta particles (β^-)
Positron (β^+)

Use

Non-melanoma skin cancer (NMSC) of the basal and squamous cell types.

Target/Mechanism

The Re-188 nanocolloid emits (β^-) radiation. When applied to the lesion, radiation has a local, direct action, leading to cell death. At the same time, the immune system is activated, leading to a reaction that results in the wound healing.

Insight

The group led by Dr Cipriani (Hospital S. Eugênio - Italy) and Dr Sedda (ENEA-Italy) developed a nanocolloid containing Re-188 to be used in epidermal radioisotope therapy.

Since 2014, it is an approved therapy for the treatment of basal cell carcinoma (BCC) and squamous cell carcinoma (SCC).

It used in Europe, South Africa and Australia, mainly in cases of difficult, disfiguring or mutilating surgery.

