



Medical Devices

Multilayer bolus for radiotherapy

A research group from the Andalusian Public Health System (SSPA) has developed a novel multilayer bolus for radiotherapy made from a superabsorbent polymer

Oficina de
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Description

The materials used as bolus in radiotherapy treatments with photon and electron beams to increase the surface dose must have a similar absorption capacity to that of the human body, as well as being flexible in order to adjust to the curves of the surface of the skin. Diverse types of bolus are currently available on the market: based on gel, mouldable types based on thermoplastic materials or polycaprolactone, and those based on surgical paraffins and medical-grade silicones. However, despite the many bolus options that are commercially available, their high cost means that they are not in general use, resorting instead to the use of less precise and less exact solutions, such as gauzes and damp cloths, which present the serious disadvantage of not guaranteeing that the bolus thickness will be adequate or even that the thickness will vary considerably. Another disadvantage of the commercially available types of bolus is that it is often not possible to adapt the thickness to the specific application nor the size to the area of the patient's body where it is to be used.



Advantages

1. Variable thickness, depending on the amount of water added, to adjust it to each specific application.
2. Adaptability, can be cut to adapt to any shape.
3. High malleability, to fit the surface of the patient's skin perfectly.

4. Much lower manufacturing and development costs than those of the boluses currently available on the market, in terms not only of the technology necessary to manufacture it, but also the price of the superabsorbent material, which is highly competitive.
5. More compact storage and transport, thanks to its smaller thickness when dry (before use).



Intellectual Property

This technology is protected by patent.



Aims

We are looking for a partner interested in a license and/or a collaboration agreement to further develop and exploit this innovative technology.



Classification

Area: Medical Devices
Pathology: Others