IOS Innovative Oncology Solutions



Clinical User Guide

eXaSkin® PLUS Efficient Personalized High-Density Bolus for Photon Radiotherapy

eXaSkin® PLUS is a bi-component, high-density, patient-specific bolus that cures in approximately 3–6 minutes and is designed specifically for external beam photon radiotherapy. Unlike other non-patient-specific bolus, eXaSkin is molded directly to the patient's anatomy before CT simulation, allowing the treatment planning system to calculate dose using the actual geometry of the customized bolus. Because the bolus is incorporated directly into the treatment plan, the emphasis shifts from selecting a manufactured thickness to creating excellent conformity and eliminating clinically significant air gaps.



Clinical Advantages: - *Compared with other non-patient-specific bolus*

- Personalized bolus in approximately 3 minutes
- Excellent conformity to irregular anatomy
- Minimal air gaps
- Compatible with SGRT workflows
- Can function as an immobilization submask
- High density (~1.5 g/cm³) allows superficial lesions to be treated with photons rather than electrons in many clinical situations
- Visible on DRRs

Typical Clinical Workflow

1 Patient Setup

Immobilize the patient using your department's standard positioning devices.

The goal is to create the final treatment position before the bolus is fabricated.

2 Prepare eXaSkin

Put on gloves. Open one treatment kit and mix:

Component A (purple putty) and Component B (red catalyst). Mix vigorously for 30–40 seconds until the color is completely uniform. Never shorten the mixing time.

Working time after mixing is approximately 1.5 minutes.

Tip: Cut off the tip of the catalyst tube for faster extrusion.

3 Apply to Patient

Place the mixed eXaSkin directly over the treatment region. Adapt the material to:

- Skin contour
- Surgical defects
- Irregular anatomy

The objective is intimate skin contact; not a predetermined thickness. Allow the material to cure on the patient.

Typical cure time: 2.5–4.5 min
Complete setting: 4–6 min

Tip: Mark the bolus with an arrow or the enclosed figure to maintain consistent orientation

4 CT Simulation

Perform CT simulation with the bolus in its final treatment position. The TPS should utilize:

- Actual bolus thickness
- Actual density
- Actual shape

Unlike other non-patient-specific bolus, the customized geometry becomes part of the patient's treatment plan.

Product Selection Guide

150g

Nose, ear, eyelid, lip, fingers, hand, foot, and small skin lesions.

225g

Face, neck, shoulder, forearm, partial breast, and chest wall scar.

650g

Whole breast, chest wall, large scalp, pelvis, buttock, thigh, large extremities, and vulva.







When Should AnatGe iMold Be Used?

iMold is a reusable molding system designed to produce uniform, consistently sized sheets of eXaSkin high-density bolus for radiotherapy applications. iMold can be beneficial when a uniform sheet of geometry is preferred before patient application.



Recommended uses include:

- Whole breast
- Chest wall
- Large flat extremities
- Phantom studies
- Commissioning
- Research
- Training

Direct molding is generally preferred for:

- Nose
- Ear
- Face
- Neck
- Fingers
- Hand
- Foot
- Perineum
- Genitals
- Surgical defects
- Any highly irregular surface

Using eXaSkin in Conjunction with Thermoplastic Masks. The Workflow.

1. Prepare eXaSkin
2. Adapt eXaSkin to the patient's anatomy
3. Immediately apply the heated thermoplastic mask over the eXaSkin
4. Allow both to cool together



Combining eXaSkin with eaSyFix. The Workflow.

For extremity treatments, eXaSkin integrates well with the eaSyFix immobilization platform.

1. Position extremity on eaSyFix with IOS Moldcare cushion
2. Record indexing and cushion positions using the eaSyFix setup sheet
3. Fabricate the customized eXaSkin bolus
4. Apply the eaSyFix thermoplastic
5. CT simulate
6. Reproduce the setup using the recorded indexing for daily treatment

