**Objective**

This retrospective study examines the effect of Integra Dermal Regeneration Template (IDRT) on mortality and length of stay (LOS) in patients when treating acute burns measuring ≥20% of body surface area.

**Methods**

The authors retrospectively identified 270 adult patients admitted to Massachusetts General Hospital between 1992 and August 2000, with burns ≥20% body surface area (BSA). Of those patients, 43 were treated with IDRT and 227 patients did not receive IDRT (control group).

A previously reported mortality model was used to analyze Mortality for all 270 patients. This model is based on a number of risk factors present including (age >60 years, burn size >40% body surface area (BSA), inhalation injury). All deaths were included in mortality figures.

LOS was first compared between the patients who received IDRT and those who did not and included the total population of 270 patients. A subgroup analysis between IDRT-treated patients and those who did not receive IDRT was performed and included only patients with two or more severe comorbidities such as inhalation injury and larger TBSAs. This subgroup analysis included patients who received IDRT (n = 30) and those that did not receive IDRT (n = 158).

**Results**

**Mortality:** There were no differences in mortality rates between those patients who received IDRT and those who did not receive IDRT (p = 1.0). There was roughly a 30% mortality rate in both groups of patients. (13 of the 43 in IDRT-treated patients versus 69 of the 227 in patients in the control group).

**Length of Stay:** In the total population, the IDRT patients had a greater length of stay than those who did not receive IDRT (IDRT patients had a mean of 64 ± 23 days versus the Non-IDRT patients with 47 ± 47 days). Because the patients treated with IDRT had more severe injuries, a subgroup analysis was conducted on patients with two or more risk factors to better match the groups. In the subgroup analysis (15 patients who received IDRT and 29 patients in the control group), the mean LOS was 63 ± 18 days for patients receiving Integra whereas the mean LOS was 107 ± 60 days for patients that did not receive IDRT.

**Conclusion**

The use of IDRT did not affect mortality in this study. Both groups had a mortality rate of 30%. In the total population, the patients receiving IDRT had a greater length of stay but this can be accounted for by the greater severity of their comorbidities. For example, the patients treated with Integra were more extensively burned, had more severe inhalation damage, and a greater need for escharotomy. When the groups were matched for two or more of these risk factors, the Integra group showed significantly less LOS, and faster wound closure. Therefore, IDRT use in these severely burned patients resulted in shorter lengths of stay and faster wound closure.
Indications
Integra template is indicated for the postexcisional treatment of life-threatening full-thickness or deep partial-thickness thermal injuries where sufficient autograft is not available at the time of excision or not desirable due to the physiological condition of the patient.

Integra template is also indicated for the repair of scar contractures when other therapies have failed or when donor sites for repair are not sufficient or desirable due to the physiological condition of the patient.

Integra template is also marketed as Integra® Omnigraft™ Dermal Regeneration Matrix. Omnigraft is indicated for the use in the treatment of partial and full-thickness neuropathic diabetic foot ulcers that are greater than six weeks in duration, with no capsule, tendon or bone exposed, when used in conjunction with standard diabetic care.

Contraindications
Use of Integra template is contraindicated in patients with known hypersensitivity to bovine collagen or chondroitin materials.

Integra template should not be used on clinically diagnosed infected wounds.

References

Availability of these products might vary from a given country or region to another, as a result of specific local regulatory approval or clearance requirements for sale in such country or region.

• Non contractual document. The manufacturer reserves the right, without prior notice, to modify the products in order to improve their quality.
• Warning: Applicable laws restrict these products to sale by or on the order of a physician.
• Consult product labels and inserts for any indication, contraindications, hazards, warnings, precautions, and instructions for use.

Discussion
1. The mean LOS for patients treated with IDRT with two or more risk factors had a 41.1% reduction in LOS from 107 days for the control group to 63 days in the IDRT group.

2. The IDRT group resulted in a shorter LOS even though these patients required escharotomy more frequently than those not treated with IDRT.
3. There is a trend toward reduction in time to effective wound closure.