injection with a transdermal patch to assess which method is more effective in preventing and reversing RIF.

**METHODS:** Skin of athymic CD-1 nude mice was irradiated (IR): 30 Gy fractionated over 2 weeks. Three milligrams of DFO was given daily, either as a direct subcutaneous injection or as a transdermal patch over the area. Mice were divided into treatment groups (n = 5) based on timing of DFO administration during the 10-week experiment. Biomechanical and perfusion outcomes were investigated.

**RESULTS:** Hematoxylin and eosin sections revealed increased dermal thickness with IR, which decreased with DFO treatment (p < 0.0001). Trichrome staining demonstrated increased dermal collagen content in response to IR, again decreased with DFO treatment (p < 0.0001). CD31 endothelial marker immunofluorescence was diminished with RIF, however, DFO treatment limited this decrease (p = 0.0250). Laser Doppler perfusion imaging revealed a significant decrease in superficial blood flow secondary to RIF, and preserved flow with DFO (p < 0.0001). Cutometer Dual MPA 580 measurements demonstrated decreased loss of skin elasticity with DFO treatment compared with IR (p < 0.0001). Mechanical strength testing also revealed less stiffening of the skin with DFO treatment compared with IR control skin (p = 0.0170). The transdermal patch displayed greater effect than direct injection in all of these measures.

**CONCLUSION:** DFO treatment augments dermal healing while decreasing fibrotic responses to IR. The patch formulation was superior to injection and presents a noninvasive method of administration. In addition, longer treatment timelines experienced better results in both patch and injection groups.

**3D Imaging: A Powerful Tool for Defining Sexual Dimorphism in Masculinizing Chest Operation**

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**INTRODUCTION:** For the transgender individuals transitioning from female to male, “top surgery” has become increasingly more prevalent. In the double-incision mastectomy technique, there is no consensus on the ideal scar location and inframammary fold (IMF) placement for this procedure. With sophisticated imaging tools, cadaver analysis along with radiographic analysis can be combined to analyze phenotypic differences between the cis-male and cis-female chests.

**METHODS:** Sixty chests were analyzed using cadaver analysis (n = 30) or 3D reconstruction of CT images (n = 30) using Vitrea software. Chest proportions were recorded using each technique, correlating surface anatomy with bony structures. Measurements included nipple areolar complex location, IMF position, as well as dimensions of the pectoralis major muscle and rib cage.

**RESULTS:** Cadaver chest analysis and radiographic chest analysis revealed cis-male chest walls were, on average, wider and longer than cis-female chest walls. The pectoralis major muscle dimensions and its insertion location was found to not significantly different between male and female chests. The male nipple areolar complex tended to be shorter in length and width compared with the female nipple areolar complex. Finally, the inframammary fold was found between the fifth and sixth rib in both male and female chests.

**CONCLUSION:** Our findings confirm natal male and female IMFs are positioned between the fifth and sixth ribs. This fact affirms the technique of masculinizing the chest, keeping the IMF at the same rib level and following the pectoralis muscle edges to define the resulting scar in a way that differs from other reported techniques.