Application of Fish Skin Graft* to a necrotic wound in a patient with perforated colon cancer

Ahsan Raza, MD, FACS, FASCRS Rapides Surgical Specialists, Alexandria, LA

INTRODUCTION

Kerecis Omega3 is a fish skin-derived acellular dermal matrix product used in various wound care applications. It has shown promising results in wound healing, including many complex and complicated wounds1. Our Case report discusses a patient with necrotizing fasciitis of her abdominal wall from colon perforation that was debrided and grafted with the xenograft.

A 61-year-old female with a history of breast cancer was diagnosed with colon cancer and treated as an outpatient. She initially had a colonoscopy last year, which showed a tubular adenoma and no mass on the right side of her colon. A CT scan which showed liver lesions and metastatic disease biopsy-proven colon carcinoma. A port was placed, and she was started on chemotherapy. She received her last dose of chemotherapy one week before the presentation. She has a white count of 19 and a CT scan concerning a perforated cecum at the area of her cancer with a retroperitoneal abscess.

METHODS

She was taken for an emergent Exploratory laparotomy, drainage of abdominal and retroperitoneal abscess, open right hemicolectomy, diverting ileostomy, abdominal washout, intra-abdominal omental patch, placement of Strattice mesh, debridement of necrotizing soft tissue infection of the right flank. She had extensive sepsis with a necrotic abdominal wall and sepsis to the hip joint. There was stool contamination of the wound, and extensive debridement was needed.

RESULTS

The wound was followed over the next week with VAC changes, and the patient eventually went home with a VAC, and care was continued by home health. A few weeks later, she presented with a definitively healed wound with excellent granulation tissue ready for a skin graft on post-op day 28.

CONCLUSIONS

Omega 3 fish skin xenografts are FDA approved for treating chronic and acute surgical wounds2,3. The product is an acellular dermal matrix harvested from Icelandic cod with a porous microstructure like human skin. Characteristics of the xenograft include bacterial resistance, angiogenesis, and inflammatory cytokine mitigation3. Our study we noted no wound complications and excellent wound healing after one application of the Kerecis product in a wound complicated by stool contamination initially, with necrotic tissue in a patient on chemotherapy. The results after xenograft application were outstanding, proving the anti-inflammatory and angiogenic properties of the product. Our case study validates Kerecis as a viable option for treating complex wounds in patients who are already immunocompromised. More significant studies are warranted to validate our findings further.

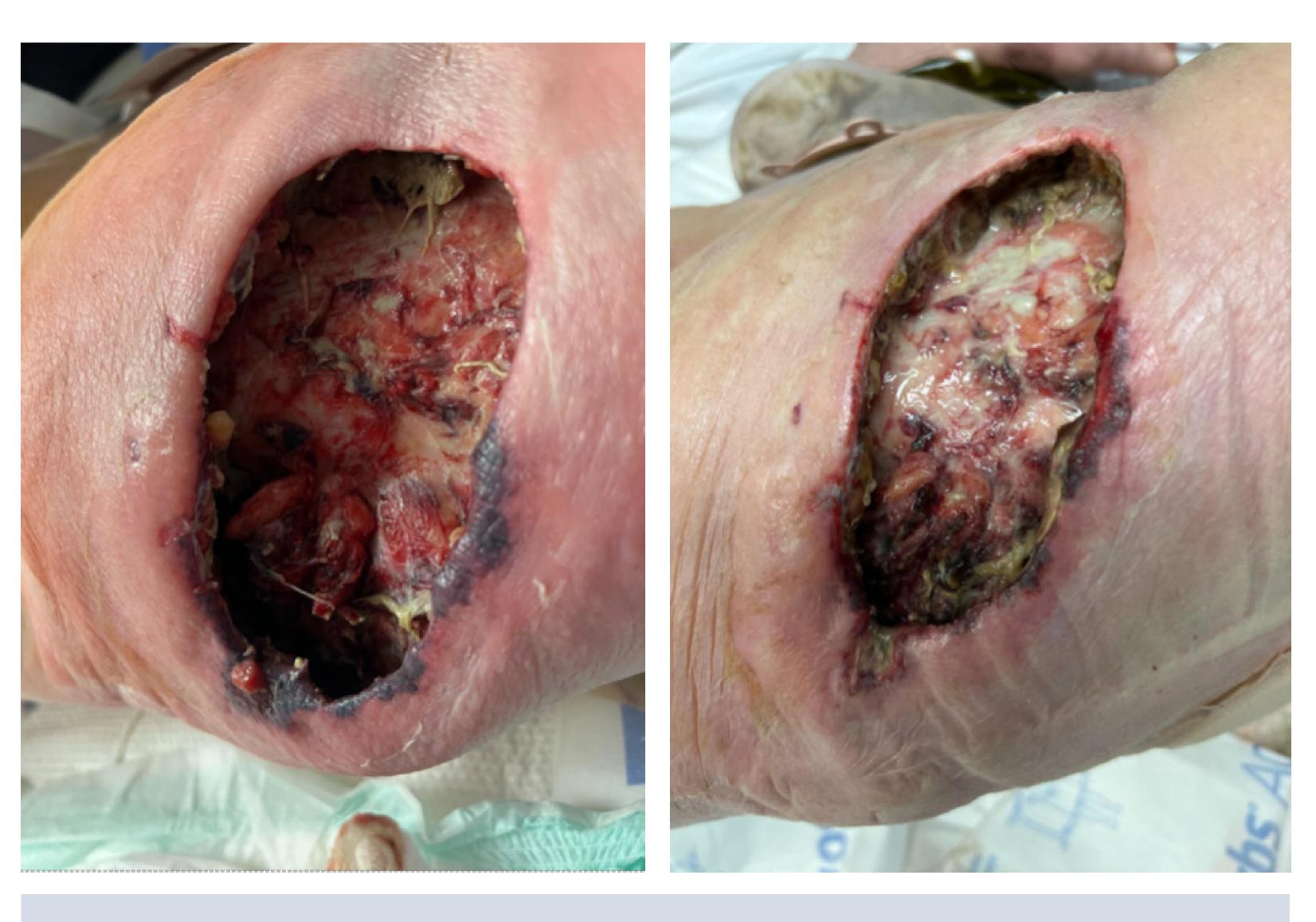
CASE: 61-YEAR-OLD FEMALE WITH PERFORATED COLON CANCER

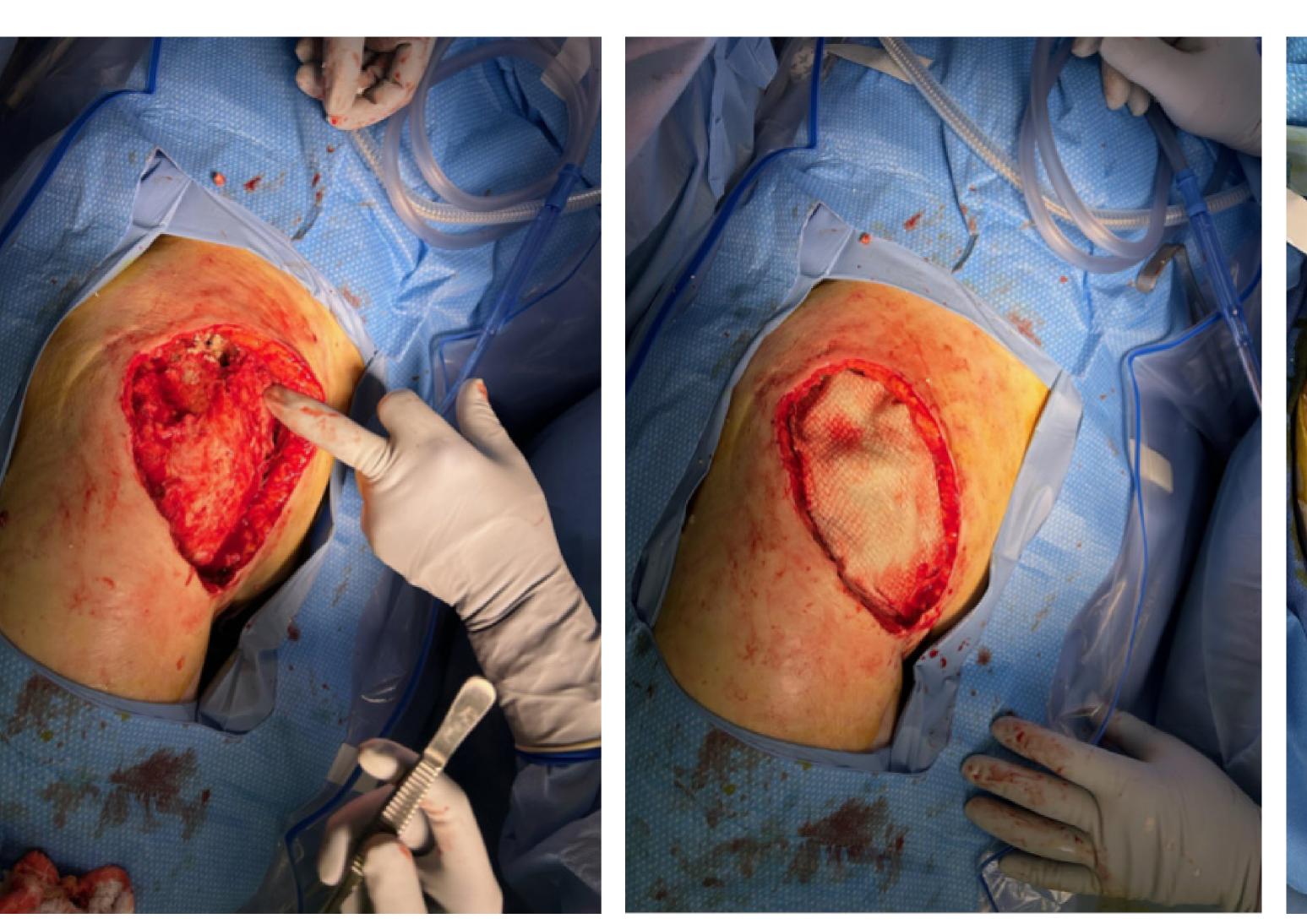
Patient History: 61-year-old female with past medical history of stage IV breast cancer and multiple liver lesions

Wound History: Patient has been having right flank cellulitis for 2 weeks and presented to ER with worsening flank pain with necrotic skin and area of purulence, perforated cecal mass, with extensive involvement of abdominal wall tissue invading into right hip joint

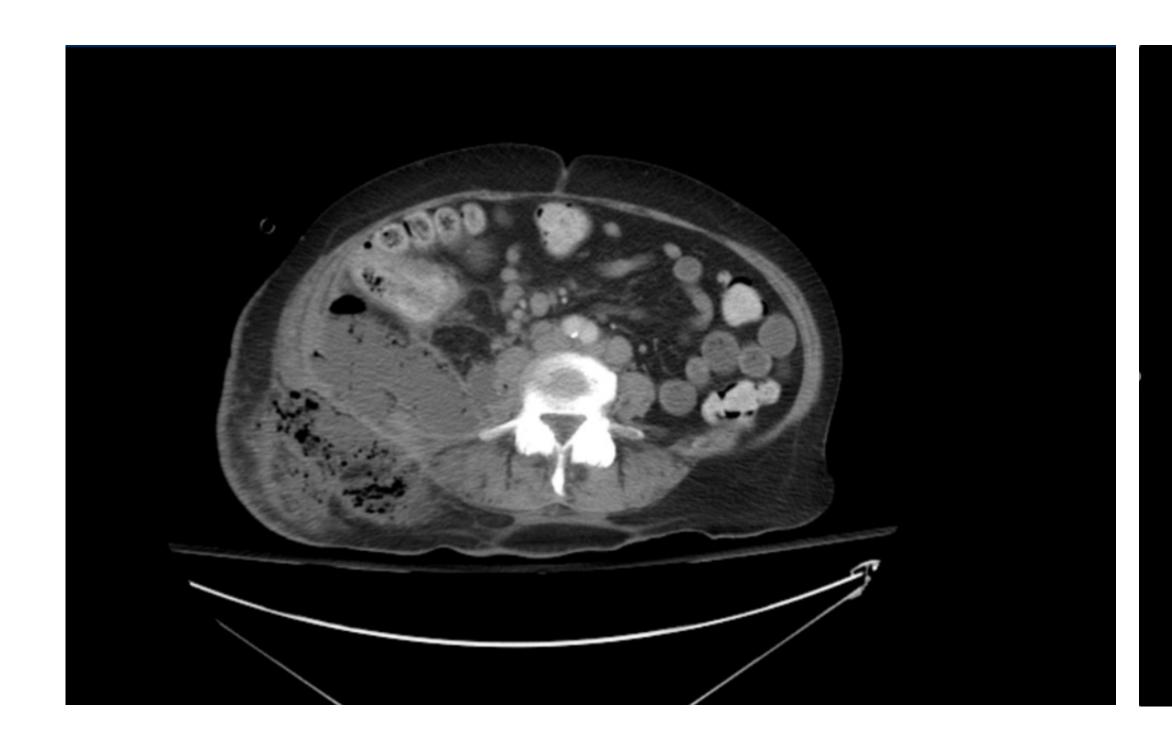
Fish Skin Graft Applications: Single application of fish skin graft in OR

Patient Outcomes: At 4 weeks post op, graft has fully incorporated, and wound is ready for skin grafting





Further debridement Wound size: 17 cm x 10 cm x 4 cm



Initial presentation

Large retroperitoneal abscess with lateral extension through the lower lateral abdominal wall musculature into the subcutaneous tissues. Area of retroperitoneal abscess posterior to the cecum and along the iliac is muscle measures approximately 15 cm in maximal length



5 days following application of fish skin graft in OR with some slough and no signs of infections





Increased granulation tissue, patient is discharged with VAC



4 weeks since initial surgery, wound bed ready for skin graft

*KerecisTM, Kerecis, Isafjordur, Iceland

References

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