(MRI). The transplanted cells were retrieved three months later. Histological assessment and glycosaminoglycan (GAG) levels of reconstructed tissue were assessed. The experimental animal protocols were approved by the Animal Welfare and Animal Care Committee of the National Institute of Biomedical Innovation (Osaka, Japan) (approval ID: DS25-32).

RESULTS: Remarkable formation change was detected in both of 2 groups clinically. We also detected density difference in the MRI T1/T2 images. Elastic cartilage was detected in histological assessment, GAG levels were nearby original auricular cartilage. No complication such as inflammation and tumorigenesis were observed in any of the experiments.

CONCLUSION: These 2 methods will be a highly promising to treat craniofacial deformities. We conclude that to use properly these methods will be needed for patient condition.

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A Novel Technique for Duct-Preserving Nipple Eversion

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Duct preservation during nipple eversion surgery can be challenging. Chronic shortening of the intact ducts and ptosis from post-partum or involutional changes will predispose the patient to recurrent or persistent nipple retraction.

We present a case of a 23-year old nulliparous lady with benign bilateral grade 3 nipple inversion (Han & Hong classification¹) who underwent duct-preserving nipple eversion surgery using autologous dermal scaffold grafts.

Using inferior nipple-areolar junction incisions, the ducts were identified, isolated and preserved by release dissection of the inter-ductal fibrous support tissue. De-epithelialised dermal grafts were harvested from the flank. These were woven around the central ducts and fashioned into cylindrical collars. A four-point clover leaf intradermal suture provided the foundation to prevent retraction of the nipple and supporting collar. The skin was closed, and doughnut-shaped sponge dressings were applied to avoid direct pressure on the everted nipples.

Although successful lactation is yet to be confirmed, she is delighted with the results and maintains excellent nipple projection at 6 months following surgery.

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Rare Case: Aneurysmal Bone Cyst in the Metacarpal of a Child

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INTRODUCTION: Aneurysmal bone cyst is a rare, rapidly growing, and destructive benign bone tumor.¹ The incidence of aneurysmal bone cysts in the hand of a child is incredibly rare, and only a handful of cases have been reported throughout the literature.²⁻⁶ There is no evidence based-protocol for treatment, and controversy exists over the optimal treatment. While considered benign, aneurysmal bone cysts can behave in a very aggressive manner. We
report a case of an aneurysmal bone cyst of the third metacarpal of the right hand in a 5-year-old child.

CASE REPORT: The patient is an ambidextrous 5-year-old with a 6-month history of swelling of the right hand dorsum centered over the 3rd metacarpal. Imaging studies showed a lytic lesion occupying 90% of the 3rd metacarpal with a mass-effect on the 2nd and 4th metacarpals. At surgery, the bone cortex was egg-shell thin. As much cortex as possible was preserved. The aneurysmal bone cyst was excised and the bone curetted. A cancellous bone graft was harvested from the right iliac crest and packed to fill the defect. Permanent sectioning confirmed the diagnosis. He has been followed for two years since his surgery and there is no evidence of recurrence. He has a full range of motion in the right hand. He is followed for 6-month intervals to monitor for recurrence.

DISCUSSION: The goal of the care of this child was to remove the rapidly expanding bone cyst and to reconstruct the metacarpal, while preserving length, growth potential, and function. To date, this has been accomplished. While curettage has been noted to have a high recurrence rate, the child has not demonstrated any evidence of recurrence at 2 years post-op.

CONCLUSION: We report a rare case of an aneurysmal bone cyst of the hand of a young child treated with curettage and cancellous bone graft. In doing so, the growth plate was preserved, function maintained, and despite reports of high recurrence with curettage and grafting, we have seen no evidence of recurrence in this child.

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Abdominal Dermis Tensile Strength in Aesthetic and Massive Weight-Loss Patients and Its Role in Ventral Hernia Repair: A Cross-Sectional Study

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INTRODUCTION: Skin tissue characteristics have been researched for years, particularly with regard to tissue engineering. Clarifying the biomechanics of abdominal skin could lead to different uses for this tissue such as the ventral repair of hernias in patients with excess skin and incisional hernias. The objectives of this study were to compare the maximum tensile strength of abdominal skin to commercial meshes and to verify whether or not it varies between aesthetic patients and massive weight-loss patients.

MATERIALS AND METHODS: This was an experimental cross-sectional study. Skin samples sized 32x20 mm were taken from 15 abdominoplasties and 10 panniculectomies. The skin specimens were analyzed in vertical and horizontal tensile tests with a device designed for the study. The results were compared between the two groups including their traction directions. Commercial meshes available in Brazil were also tested. The results were analyzed using the Generalized Estimating Equation (GEE), the Winpepi® software for statistical power calculation and Student’s t-test. The study was approved by the local ethics committee.

RESULTS: The aesthetic and post-bariatric groups were similar in most baseline characteristics except age, which was 37.2±9.9 years in abdominoplasty patients and 45.9±8.8 in panniculectomy patients (p = 0.037). The maximum tensile strength supported vertically by abdominal dermis was (mean ± standard-error) 403.5±27.4N in the abdominoplasty group and 425.9±33.9N in the panniculectomy group. Horizontally, the values were 596.5±32.2N and 612.5±43.9N respectively. The strengths between traction directions were significantly different (p < 0.001). There were no differences between the groups with regard to the maximum tensile strength (p = 0.472). Considering our sample size, it is possible to affirm that, if a difference between aesthetic and post-weight-loss patients exists, it is lesser than 100N (β = 0.15).

Tested commercial meshes had the following values: polypropylene 104.6N, low-weight polypropylene 54.4N, polytetrafluorethylene (PTFE) 82.2N, and hydrated porcine small-intestinal submucosa 60.0N.