cancer, it is standard perioperative practice for excised tissue obtained from routine reduction mammoplasty procedures to be sent for pathology review. On average, an estimated 0.2–1.1% of all reduction mammoplasty specimens reviewed by pathology is diagnosed with occult malignancy. On occasion, atypical proliferative lesion of variable malignancy potential is also reported, which may become an area of concern given the management of such lesions may be unfamiliar to plastic surgeons. We aimed to provide a review of commonly diagnosed proliferative lesions identified in routine reduction mammoplasty specimens and the best supporting evidence for their subsequent management.

METHODS: Retrospective literature review using a PubMed search of all English-language articles published between 1990 and 2016 containing the phrases (“reduction mammoplasty”, “breast reduction”, “proliferative”, “atypical”, “hyperplasia”, “ductal”, “epithelial”, “lobular”, “stromal” and “mesenchymal”) was completed. A total of 210 publications were generated after initial screening with 10 articles ultimately incorporated after comprehensive review.

RESULTS: Commonly encountered proliferative lesions among reduction mammoplasty specimens include pseudoangiomatous stromal hyperplasia (PASH), atypical lobular hyperplasia (ALH), atypical ductal hyperplasia (ADH) and flat epithelial atypia (FEA). PASH and FEA with no concomitant atypical ductal or lobular lesions confers no risk of subsequent malignancy and routine standard of care is recommended. ADH and ALH confer a four-five-fold increased risk of subsequent breast carcinoma with increased risk among high risk individuals. For this patient cohort, current management strategies recommend referral to a breast program, biannual clinical exam, yearly mammography with breast MRI, genetic testing for BRCA 1/2 gene mutation with or without chemoprevention in higher risk individuals.

CONCLUSION: Our review provides important findings by highlighting the most frequently encountered atypical proliferative lesions among routine reduction mammoplasty specimens as well as current evidence supporting management strategies.

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Liposomal Bupivacaine in Implant-Based Breast Reconstruction: Patient Outcomes and Economics

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PURPOSE: The purpose of this study is to evaluate the role of liposomal bupivacaine in postoperative pain control following implant-based breast reconstruction, the effect of liposomal bupivacaine on postoperative opioid consumption and opioid related adverse events, and the effect of liposomal bupivacaine on length of hospital stay.

METHODS: A prospective, randomized, blinded trial of liposomal bupivacaine for postoperative pain management following implant based breast reconstruction was performed. This study consisted of two arms of patients undergoing immediate or delayed implant based breast reconstruction. Patients in the control arm were treated intra-operatively with injections with 0.25% bupivacaine and epinephrine, with 20mL delivered to each breast pocket. Patients in the experimental arm were treated with one 20mL, 266mg vial of 1.3% liposomal bupivacaine, with 10mL delivered to each breast pocket. Pain scores were recorded over the course of the patients’ hospital stay. Pain medications were converted to morphine equivalents.
to calculate total opioid usage. Length of stay and other direct cost data was collected over the post operative period.

RESULTS: Twenty patients have been enrolled prior to this interim analysis. Ten women were randomized to each arm of the study. Average age was 56.1 years for patients in the control arm and 46.9 years for patients in the experimental arm. Average post-operative pain scores were 3.54 for patients in the control arm and 3.52 for patients in the experimental arm. Opioid consumption, in morphine equivalents, was 167.25 mg for patients in the control arm and 135.12 mg for patients in the experimental arm. Diazepam consumption was 17.22 mg for patients in the control arm and 5.5 mg for patients in the experimental arm. Average length of hospital stay was 43.86 hrs for patients enrolled in the control arm and 32.36 hrs for patients enrolled in the experimental arm. Average ondansetron requirements were 6.4 mg in the control arm and 6 mg in the experimental arm. There were three episodes of nausea and vomiting in the control arm and two episodes in the experimental arm.

CONCLUSION: Early interim analysis suggests that liposomal bupivacaine has the potential to reduce opioid consumption, length of stay, and direct costs. These trends have yet to reach statistical significance, however patient recruitment and data collection is ongoing.

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Reimbursement in Breast Reconstruction: To Carve Out or Cut Out, that is the Question

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BACKGROUND: With greater awareness and federal mandates, the demand for breast reconstruction has grown. Despite this increasing patient population, the uncertainty of physician reimbursement persists; with wide variation based on payor type. Although the technical aspects and time commitments of autologous and expander based reconstruction are the same, regardless of insurance status, the expected reimbursement for these services and potential “revenue loss” could have major implications in patient access to their reconstruction of choice. Some surgeons have attempted to circumvent this issue by developing insurance carve-outs for autologous reconstruction. For those surgeons unable to negotiate this arrangement with insurance carriers, a major concern is that these surgeons will find it financially challenging to offer certain types of reconstructions to all payor types. The purpose of this study is to identify re-imbursement variation among payor type for breast reconstruction procedures at a tertiary academic center in an effort to understand potential financial implications and begin developing safeguards to prevent effects on patient access to all available reconstructive options.

METHODS: Billing and insurance data were collected over a 10 year period for CPT codes 19364 (ABR) and 19357 (IBR). Unilateral and bilateral (-50) procedures were analyzed separately. Patients were categorized by insurance type. Charges and reimbursement were collected and compared using ANOVA testing and a two-sized Student’s T-test with p<0.05 indicating significance.

RESULTS: 1275 women underwent unilateral implant-based reconstruction (UIR), and 1089 women underwent bilateral implant-based reconstruction (BIR). For UIR, charges to Medicaid, Medicare, and private insurance were similar ($4080, $4225, and $4058, p=1). Reimbursement differed significantly between all groups (p<0.001) with Medicaid reimbursing an average of $703, Medicare $1374, and private insurance $3017. For BIR, charges were again similar ($8465, $8220, $8268, p=0.96), however reimbursement for Medicaid was $1250 and Medicare $2082, which differed significantly from private insurance at $4972 (p<0.001). 241 women underwent unilateral free flap breast reconstruction and 109 underwent bilateral. In unilateral cases, charges differed significantly Medicare ($11433) and both Medicaid ($8934) and private insurance ($9429). Reimbursement differed between all groups (P<0.001). Finally, charges in bilateral free flap cases did not differ, but while Medicaid and Medicare had similar reimbursements ($2132, $4134, p=0.6), this differed significantly from private insurance ($6179, p=0.002). Overall, Medicaid reimbursement for breast reconstruction was 15%, Medicare 25%, and private insurance 51%.

CONCLUSIONS: Significant gaps exist between payor reimbursements for breast reconstruction. These gaps pose