study was to identify the incidence of symptomatic VTE in patients undergoing harvest of lower extremity flaps who received standard chemoprophylaxis while hospitalized to identify factors which could change postoperative prophylaxis guidelines.

METHODS: One hundred twenty-seven consecutive patients undergoing unilateral lower extremity flap harvest from June 2011 to December 2015 were retrospectively evaluated for the development of VTE. Each patient had a flap harvested from the lower extremity and inset into the abdomen or perineum and not the ipsilateral leg/foot/ankle. All patients with symptomatic leg pain received bilateral ultrasonographic evaluation for VTE formation. The contralateral, non-operative leg served as an internal control. Sixty comorbidity-matched patients who underwent perineal tumor extirpation without reconstruction provided an external control.

RESULTS: Sixty patients were male (47%) with mean age of 52 years. Mean follow-up was 339 days. All patients underwent flap reconstruction for an oncologic defect of the abdomen or perineum with 79% undergoing perineal reconstruction. Most patients underwent anterolateral thigh (41%) or gracilis flap (40%) harvest. Eleven patients developed VTEs in either leg (9%), for a total of 15 episodes of VTE. Of these, 10 were donor site (66%) and 5 were contralateral leg (33%). There was a non-significant trend towards increased odds for the formation of donor-site VTE when compared with contralateral lower extremity (OR:1.7;CI:0.80–3.4;p=0.15). Patients who underwent flap harvest had a 9 times higher odds of VTE formation when compared with their comorbidity matched controls who did not undergo flap reconstruction (OR:9.08;CI:1–82.6;p<0.05).

CONCLUSIONS: The rate of VTE is higher than previously appreciated for reconstructive procedures of the perineum that utilize lower extremity flaps. Routine surveillance or extended prophylaxis may be warranted.

Head-to-head Comparison of Bleeding and Venous Thromboembolism (VTE) Risk with Preoperative Heparin vs. Preoperative and Extended Duration Postoperative Enoxaparin in Abdominal Body Contouring Patients

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PURPOSE: Although chemoprophylaxis for venous thromboembolism (VTE) has been found safe in several studies, there are currently no established guidelines for chemical prophylaxis among outpatient plastic surgical procedures. Abdominoplasties have one of the highest VTE rates of all plastic surgery procedures with an incidence of 0.3–9%, with the risk doubling with any additional procedure. Although many VTE are not clinically significant, it is a potentially preventable complication that can be life threatening. The aim of this study is to evaluate the safety of prescribing outpatient VTE chemoprophylaxis after body contouring surgery when compared to preoperative

METHODS: All abdominoplasty and panniculectomy cases performed by a single surgeon from 2007–2016 were retrospectively reviewed to assess the impact of a change in practice in VTE prophylaxis management in 2012. Group I was the initial practice of a single dose of 5000 Units of preoperative subcutaneous heparin. Group II is the current practice of preoperative subcutaneous enoxaparin 40mg followed by seven days of outpatient 40mg subcutaneous enoxaparin upon discharge. Data collection included demographics, pre-operative risk factors, and Caprini scores. Complications evaluated included bleeding/hematoma, infection, skin dehiscence/necrosis, and VTE.

RESULTS: 152 patients total with 74 in Group I and 78 in Group II. There were no significant differences between demographics or risk factors between Groups I and II. There was a statistically significant different in procedures performed with a higher number of panniculectomy in Group I and a higher number of Fleur de Lis technique in Group II. There were no significant differences in bleeding/hematoma 1.4% vs. 5.1%(p=0.3), infection 10.8% vs. 9%(p=0.7), seroma 8.1% vs. 9%(p=0.92) or major wound healing 4.1% vs. 5.1% (p=0.16) between the Group I and II. The incidence of VTE in the population was 0.66% with 1 patient, in Group I being diagnosed with a DVT/PE on postoperative day 1. The patient, who had a Caprini score of 5, was initially planned for Group II, but could not receive chemoprophylaxis due to an active bleed from a concurrent gynecologic procedure.
CONCLUSIONS: A 7 day course of post-discharge, prophylactic enoxaparin does not significantly increase risk for bleeding in elective body contouring patients, when compared to a single preoperative dose of heparin. Ongoing work in a larger population is needed to examine VTE risk reduction with extended duration enoxaparin.

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Economic Benefit of Carpal Tunnel Syndrome Treatment in the Medicare Patient Population

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PURPOSE: The epidemiology of carpal tunnel syndrome (CTS) has been extensively researched. However, data describing the economic burden of CTS is limited. The purpose of this study was to quantify the disease burden of CTS and determine the economic benefit of its surgical management.

METHODS: A retrospective review of a Medicare database within the PearlDiver Supercomputer (Warsaw, IN) was performed for patients undergoing open (OCTR) or endoscopic carpal tunnel release (ECTR) from 2005–2012. The PearlDiver database is a publicly available Health Insurance Portability and Accountability Act (HIPAA)-compliant national database compiled from a collection of private payer records. This database contains current procedural terminology (CPT) and International Classification of Diseases, Ninth Revision (ICD-9) codes. Patients who underwent OCTR were identified by Current Procedural Terminology CPT-64721 and International Classification of Disease ICD-9 code 04.43. ECTR was identified by CPT-29848. CTS was identified by ICD-9 354.0. This data was used to calculate the total number of disability-adjusted life years (DALYs) associated with CTS. A human capital approach was employed and gross national income per capita was used to calculate the economic burden.

RESULTS: From 2005–2012 there were 1,500,603 individuals identified in the Medicare patient population with the diagnosis of CTS. Untreated, this results in 804,113 DALYs without age weighting and discounting and 450,235 DALYs with age weighting and a discount rate of 3%. This amounts to between $21.8 and $39 billion in total economic burden, or $2.7 to $4.8 billion per year. 507924 patients underwent open carpal tunnel release (OCTR), while 68,768 underwent endoscopic carpal tunnel release (ECTR). Surgical management of CTS has resulted in the aversion of 138,000–290,000 DALYs. This has yielded between $800 million and $1.8 billion in economic benefit per year. Average cost per patient was $3,820 and $2,952 for OCTR and ECTR respectively. ECTR resulted in greater economic benefit per patient ($11,602-$23,042) than OCTR ($10,734-$22,174).

CONCLUSION: CTS is prevalent in the Medicare patient population, and is associated with a large amount of economic burden. The surgical management of CTS leads to a large reduction in this burden, yielding extraordinary economic benefit. ECTR has a lower cost than OCTR, which results in greater economic benefit per patient if examining DALy’s averted. A cost-effectiveness study using current cost data would provide greater insight into the economic aspects of CTS management.

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Alternatives to ADM: Utilization of a Gore DualMesh Sling as a Cost Conscious Adjunct for Breast Reconstruction

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PURPOSE: This study seeks an alternative to acellular dermal matrix (ADM) in two staged breast reconstruction while minimizing cost. It was hypothesized that use of a Gore DualMesh would allow for similar intraoperative tissue expander fill volumes, time to 2nd stage, and number of post-operative fills compared to ADM at only a fraction of the expense.

METHODS: A retrospective review of a Medicare database within the PearlDiver Supercomputer (Warsaw, IN) was performed for patients undergoing open (OCTR) or endoscopic carpal tunnel release (ECTR) from 2005–2012. The PearlDiver database is a publicly available Health Insurance Portability and Accountability Act (HIPAA)-compliant national database compiled from a collection of private payer records. This database contains current procedural terminology (CPT) and International Classification of Diseases, Ninth Revision (ICD-9) codes. Patients who underwent OCTR were identified by Current Procedural Terminology CPT-64721 and International Classification of Disease ICD-9 code 04.43. ECTR was identified by CPT-29848. CTS was identified by ICD-9 354.0. This data was used to calculate the total number of disability-adjusted life years (DALYs) associated with CTS. A human capital approach was employed and gross national income per capita was used to calculate the economic burden.

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