



Radical Resection of Locally Advanced Chest wall cSCC with Muscle Flap Reconstruction

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Introduction

- Estimated incidence of cSCC in the US is 71.4 and 46.4 per 100,000 for men and women respectively
 - Overwhelming majority of cases are low-risk disease and 5-year cure rate is 95-100% with surgical excision
 - Risk factors: Chronic UV/sun exposure, Age, Fair Skin, Immunosuppression
- High-risk cSCC incidence is estimated to be 2-5% of all cases and overall prognosis is poor.
 - Mortality rate is >70% upon diagnosis of metastatic disease with median OS <2 years
 - Non-operable metastatic disease OS is approx. 12-18 months
 - Risk factors for high-risk disease: delayed presentation, tumor recurrence, head and neck location, poor differentiation, lymphovascular or perineural invasion, size >2cm, rapid growth , chronic skin inflammation i.e. radiation exposure, Marjolin’s ulcer etc.
- Therapy recommendations include:
 - Surgery with combination chemoradiotherapy
 - Primary agents: Cisplatin and Fluorouracil
 - Secondary agents: Paclitaxel and Carboplatin

Case presentation

- 50-year-old Male with no prior significant PMH.
- 1 year history of left chest wall mass which began as the size of dime and grown remarkably.
- Presenting symptoms:
 - Mass drainage
 - Restricted ROM at left upper extremity (frozen shoulder)
 - 15lb weight loss
- Social Hx:
 - Oral tobacco user
 - Heavy alcohol use
- PE, Biopsy, and imaging:
 - Left-side chest wall fungating mass measures 20x16x8cm with pustules and ulcerations draining serous fluid.
 - Suspected metastatic disease to right pelvis and left rib cage.
 - Biopsy reveals **T4N1M1 Stage IV primary cSCC**

Surgical approach:

- Radical excision deep to pectoralis major muscle with reconstruction using Latissimus Dorsi muscle flap with split-thickness skin grafting
- NCCN recommends 4-6 mm margins in local low-risk cSCC
- 10mm margins are suggested for definitive removal of advanced tumors.



Image 1: CT-chest w/ contrast shows very large upper left anterior breast mass with left axillary lymphadenopathy [arrow]

Case Presentation . . .7 weeks later

- Completion of 70Gy radiation therapy and 4 cycles of chemotherapy
 - Mass measures 11x15x5cm with significant decrease in tumor burden and mass effect to the left upper extremity.

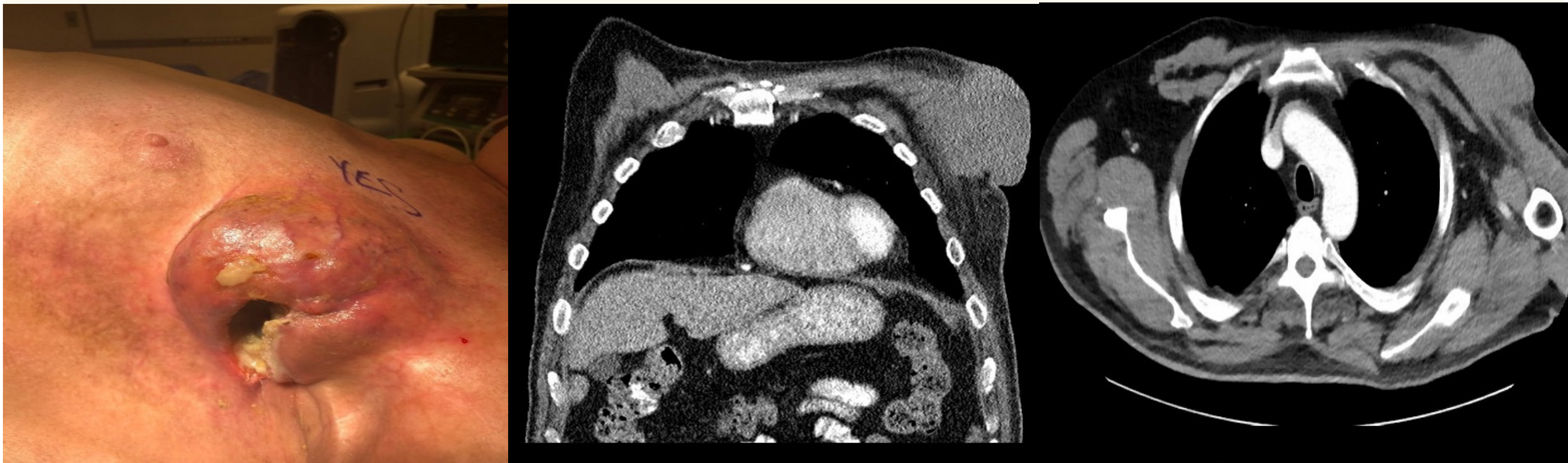


Image 2: Ct-Chest w/ contrast reveals a significant decrease in tumor burden without axillary lymphadenopathy

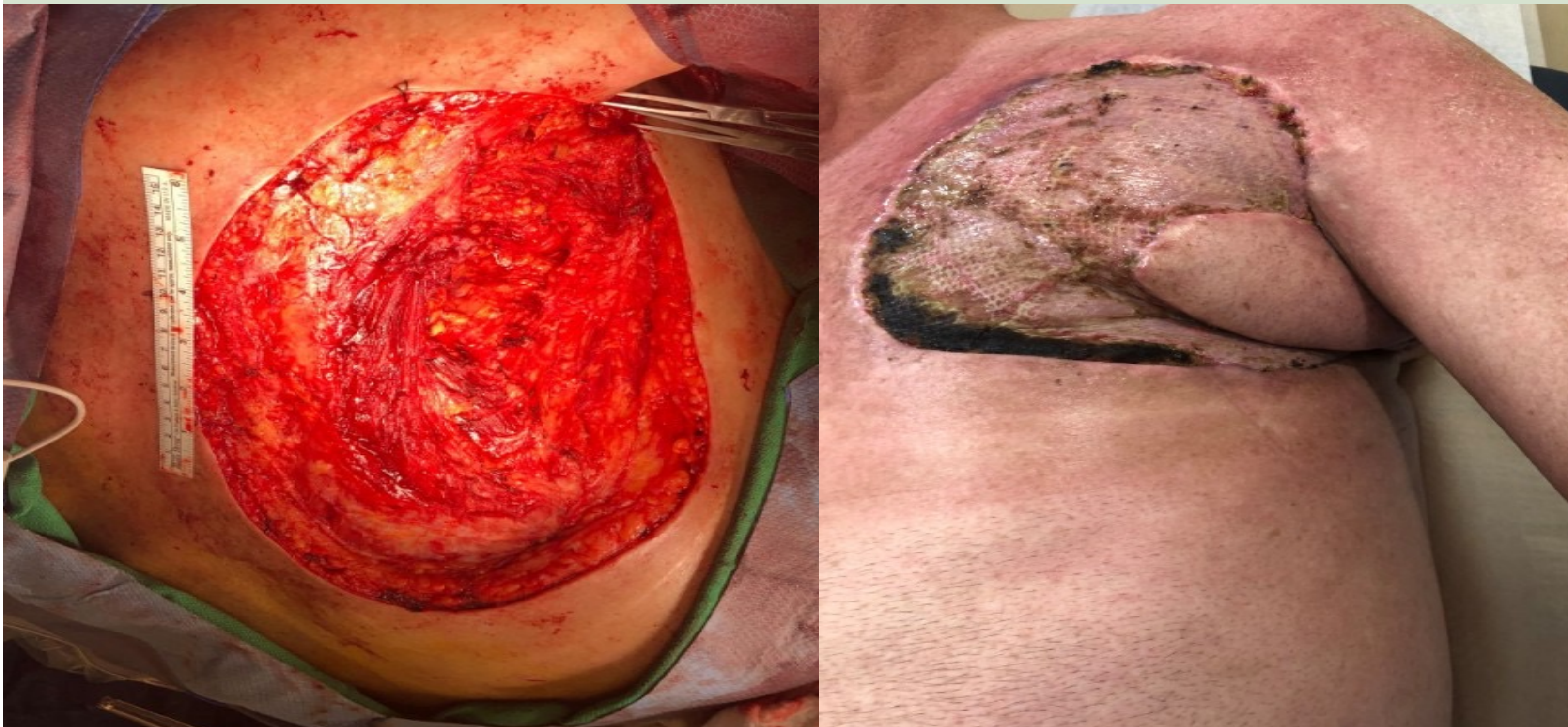


Image 3: Post-Op photographs of left axilla/chest wall extending to pectoralis major muscle after tumor removal. Subsequent post-op photographs taken 2 weeks later after reconstruction with Latissimus Dorsi myocutaneous flap and split-thickness graft to left axilla/chest wall.

Case Presentation . . . 6-month follow up

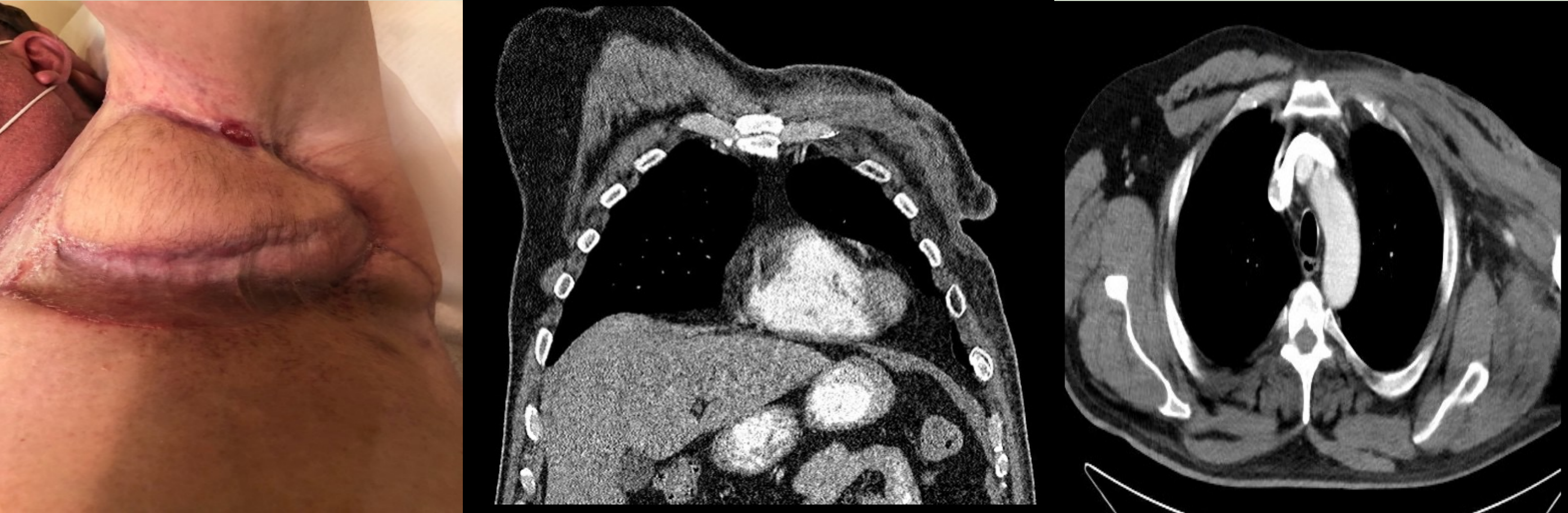


Image 4: CT- Chest w/ contrast shows no evidence of metastatic disease, local/regional tumor recurrence, or axillary lymphadenopathy.

Discussion

- Great importance to achieve negative margins to prevent recurrence of disease.
 - Tumor recurrence is estimated 40-50% with positive margins
 - Closest negative margin obtained was .5 mm during the initial excision
- Monotherapy has diminished OS vs combination with surgery in similar advanced cases
 - Current pt survival is listed at 21 months since dx
 - Pt is 18 months post-radiation, 17 months post-surgery, 16 months post-chemotherapy
- Split-thickness grafting with muscle flaps preserve limb function in pre-operative-radiation cases with large locally advanced chest wall tumors
 - Pt has achieved improved ROM and strength with left UE

Conclusion

- This case showcases a successful instance of combination therapies and interventions in advanced cSCC disease
 - Neoadjuvant chemoradiotherapy improves likelihood of surgical intervention to treat locally advanced cSCC
 - Muscle flaps in combination with split-thickness skin grafting can successfully be installed to augment resolving irradiated wounds after invasive surgery for adequate cosmetic and functional repair.

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