

## Purpose and Literature Review

We present an isolated case of a 60 year old male who presented to our clinic with recurrence of squamous cell carcinoma to his left fifth toe. Beyond case-study reports it is difficult to find literature on squamous cell carcinoma of the foot, let alone recurrence. There was a case study in JFAS in 2006 presenting a case of Metastatic Squamous Cell carcinoma resembling cellulitis and osteomyelitis of the fifth toe. There was another case study in JFAS in 2011 of Squamous Cell Carcinoma mimicking osteomyelitis. Both patients underwent amputation for definitive treatment. An article out of clinical orthopaedics and research reported bone metastases to phalanges to be 17%.

## Case Study

A 60 year old Hispanic male presented to our clinic with complaints of new onset burning pain to his left fifth digit. He had history of moderately differentiated keratinizing squamous cell carcinoma resulting in an amputation of the middle and distal phalanx in 2015. Pathology did identify clear margins per review of records. MRI was ordered for further diagnostic examination which revealed enhancing, 0.5 x 0.8 x 0.6 cm, soft tissue nodule within the dorsal aspect of the surgical bed of the fifth toe amputation site (Figure 1a). Of note the patient was also being followed by General Surgery and underwent excisional biopsy of left groin lymph node due to concerns of malignancy as he had a PET CT scan that showed the left groin lymph node with signal uptake (Figure 1b). Pathology showed moderately differentiated squamous cell carcinoma with the excised Inguinal Lymph Node. Decision was made by General Surgery to return to operating room for superficial groin dissection as well as joined operation with our service for more proximal amputation with plan to send fresh frozen sample to establish clear margin.

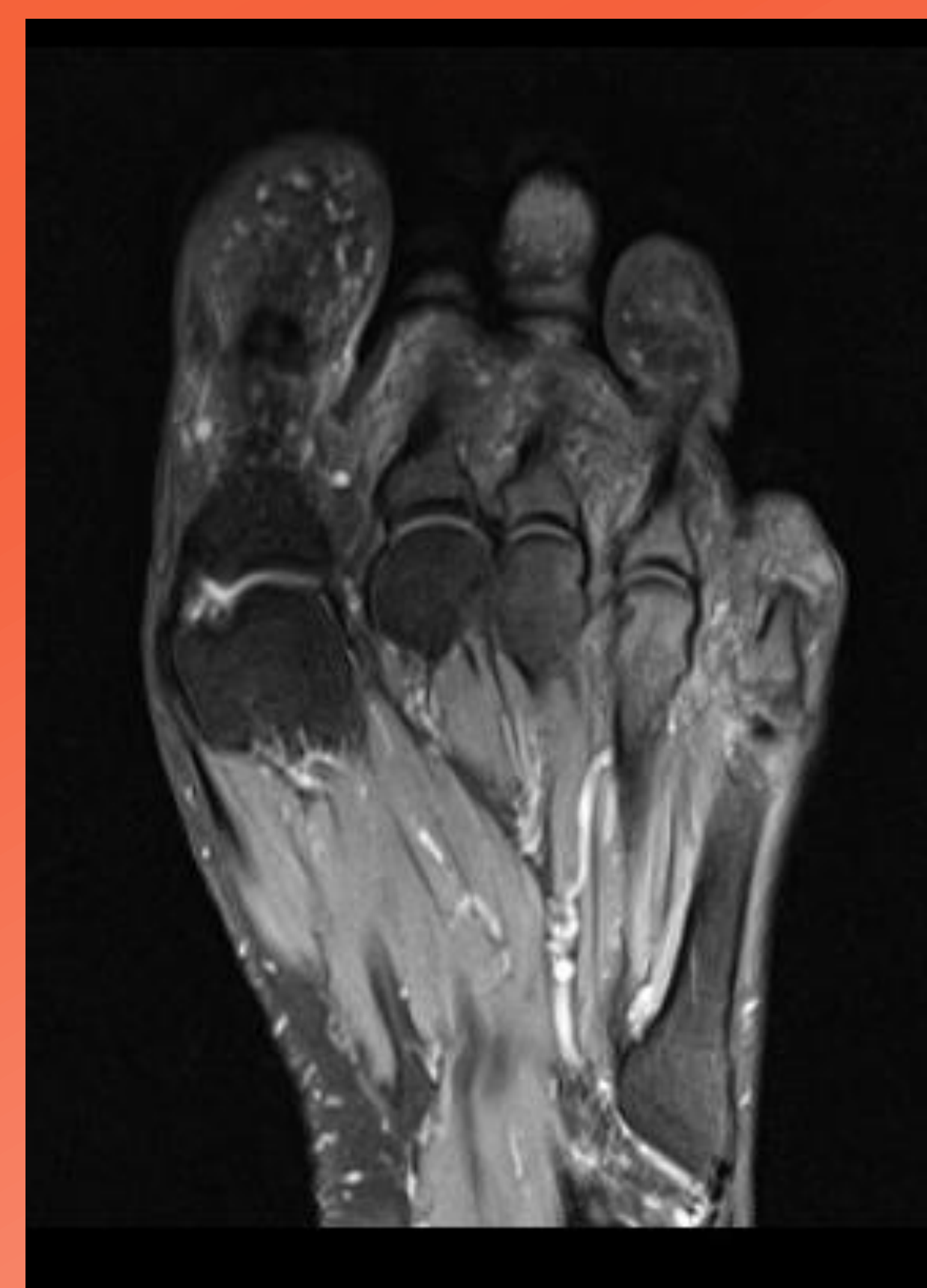


Figure 1a



Figure 1b

## Case Study and Surgical Procedure

The patient was identified in the Preoperative Holding Area by name, date of birth, medical record number, and was consented for the above-named procedure. After answering all questions and addressing all concerns, the patient was brought in the Operating Room and placed on the table in supine position. Timeout was taken x2 to identify the patient by name, medical record number, and date of birth according to AAOS guidelines. Following induction of general anesthesia, a local block was given to the left foot in reverse Mayo fashion with 10mL of 1% Marcaine plain. The foot was scrubbed, prepped and draped in the usual aseptic manner. At this time, attention was drawn to the left distal forefoot where a racquet-type incision was made. The incision was carried down to the MTPJ joint 5th, the fifth toe was removed from the field. The soft tissue was inspected. Two areas of soft tissue lobular in nature were removed, taken to field and sent for pathology. Once this was removed, a TPS sagittal saw was used to make a bone cut at the 5th met head and the 5th metatarsal head was resected. At the plantar distal edge of the incision, a roughly 1cm x 0.5cm soft tissue sample was taken and sent for fresh frozen. Prior to being sent, the distal medial portion was tagged with a short tail and the proximal lateral margin was tagged with a long tail. After analysis was completed, we received a phone call from Pathology confirming that the tissue was free of tumor and only acral skin and subcutaneous tissue was identified. At that time, normal saline was introduced into the wound and flushed. The wound was closed in layers. Adaptic, 4 x 4 gauze, Kling and Ace were applied to the foot. The patient tolerated the procedure and anesthesia well, patient was discharged to the PACU with vital signs stable and neurovascular status intact to the left foot. This concluded the podiatry portion of this case. The General Surgery team then began to proceed with their portion of the case.



Figure 2a



Figure 2b

## Results

The patient was instructed to be weightbearing heel touch in surgical shoe until suture removal. At his 2 week post operative visit pathology results were reviewed with patient which did show clean margins. At his second post operative visit 4 weeks from surgery sutures were removed. He was seen again at 12 weeks, 6 months and 1 year. At 1 year he was completely pain free (Figured 2b).



## Discussion

Squamous cell carcinoma is rarely seen in the foot, recurrence is even more rare. There has been case reports of recurrence although unlikely if the tumor is 2 cm in size. A tumor size larger than 2 cm doubles the recurrence rate and triples the metastatic rate as compared with lesions less than 2 cm.

It is important to not underestimate metastatic potential of squamous carcinoma. Sentinel Lymph Node Biopsy accurately diagnoses subclinical lymph node metastasis. 90% of metastatic squamous cell carcinoma occur within three year of diagnosis of the primary cancer. Recognition of primary tumors in the high risk category is paramount; the characteristics of high-risk squamous cell carcinoma on extremities being size >2.0 cm, indistinct clinical borders, rapid growth, multiple lesions, ulceration, recurrence after previous treatment, with histopathological documentation, poor differentiation, deep extension of the tumor into subcutaneous fat, perineural/perivascular or intravascular invasion.

The patient presented in this case report received timely care and surgical management to ensure a favorable outcome.

## References

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