# Malignant Chondroid Syringoma of the Foot – A Case Report

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**Background:** *This case report is about a very rare tumor – a malignant chondroid syringoma. The objective of this piece is to review both the case presented along with the current literature on cutaneous adnexal tumors.*
**Case Presentation:** *The patient is a 73-year-old Caucasian female with a past medical history of treated colon and breast cancer who presented with a 2-year history of a slow-growing, painful cutaneous lesion on the medial aspect of her right foot. The patient presented to her primary care physician (PCP) for right foot pain, which was attributed to bunions. The PCP encouraged the patient to see a podiatrist for this issue. Upon presentation to the podiatrist, the patient had a right foot biopsy. The pathology report showed a mixed malignant chondroid syringoma with positive margins. A re-excision to ensure complete removal was recommended. The patient presented to surgical oncology and subsequently she underwent complete excision of the right foot mass. At the time of her last visit, 7 months postoperatively, the patient continued to have issues with wound healing and continuous drainage of her surgical wound.*
**Discussion:** *This case differs from much of the current literature surrounding cutaneous adnexal tumors as it is a malignant chondroid syringoma of the foot, which is exceedingly rare. There are only three other published case reports of similar malignancies in similar places. This case study is important due to the uniqueness of the case. This case serves as a reminder of the importance of biopsy for diagnosis prior to management, as it is unlikely that such rare soft tissue tumors can be diagnosed without biopsy.*
**Conclusion:** *The take away lesson of the case is that it is important to biopsy unknown masses, and to have follow up with specific specialists.*

**Keywords:** *Malignant; chondroid; syringoma; foot; adnexal cancer; cutaneous tumor*

## INTRODUCTION

The subject of the current case study is malignant chondroid syringomas, which are an exceedingly rare type of cutaneous adnexal carcinoma.[14,16,18]

Cutaneous adnexal tumors can be either benign or malignant, and have morphologic differentiation toward several structures in skin, such as hair follicles, sebaceous glands, apocrine glands, and eccrine glands.[15,16,18] Chondroid syringomas are mixed tumors of sweat (eccrine or apocrine) gland origin. According to a recent study examining malignant cutaneous adnexal tumors, there were 4032 diagnoses between 1988 and 2006 in the United States.[1] Of these, the median age of diagnosis was 70 years, and males were more often affected than females.[1] Most of the tumors were located on the head and the neck.[1,14,15] About 7.2% of cases were in the lower extremity, making lower extremity malignant cutaneous adnexal tumors even more of a rarity.[1] Chondroid syringoma has a reported incidence of 0.098% among all primary skin tumors, and the malignant version has had less than 50 cases reported by 2017.[2,3] Although little information is published about malignant chondroid syringoma, it seems to metastasize relatively quickly and have a poor prognosis in cases that do metastesize.[4] The 5-year survival rate is good in the absence of distant metastasis.[5]

We report a 73-year-old female who presented with a right foot mass that was later diagnosed as malignant chondroid syringoma.

## CASE PRESENTATION

### Chief Complaint

Right foot pain and mass.

**History of Present Illness**
The patient is a 73-year-old Caucasian female who presented to her primary care physician (PCP) in 2017 with right foot pain. At that point in time, she had a 1.5-year history of a slow-growing painful mass on the medial aspect of her right foot. It was initially attributed to bunions as the patient had a long history of bilateral bunions, but her PCP encouraged her to see a podiatrist for further management the pain in her right foot. When she presented to the podiatrist, the podiatrist did an incisional biopsy of the lesion, which turned out to be a malignant chondroid syringoma. The patient was then referred by her PCP to surgical oncology. At the time of presentation to surgical oncology, she was asymptomatic apart from worsening pain in her right foot. She denied fever, chills, weight loss, or night sweats. She had no other complaints during this time.

**Timeline**
Patient noticed right foot mass → (1.5 years later) Patient presents to PCP → (5 months later) Patient presents to podiatrist → (1 month later) Patient referred to surgical oncology → (1 month later) Patient receives surgery → (4 months later) Patient is followed up within clinic by PCP

**Past Medical History**
The patient's medical history is significant for rectal adenocarcinoma treated in 2012 and has been in remission since, and carcinoma of the right breast treated by modified radical mastectomy and systemic chemotherapy in 1999 has been in remission since. The patient also has hypertension.

**Family History**
The patient's family history is insignificant.

**Medications**
The patient's medications included hydrochlorothiazide 25 mg/day, furosemide 20 mg/day, and metoprolol 100 mg B.I.D.

**Allergies**
None applicable.

**Social History**
The patient does not drink alcohol, smoke tobacco, or use any illicit drugs/substances.

**Physical Examination**

*General*
The patient is alert and oriented.

*Vital Signs*
Stable.

*Extremities*
Examination of the right foot reveals a healing scar measuring 1 cm, underlying which is an area of induration involving the skin. There is an indurated area on the medial aspect of the foot measuring about 6–7 mm transversely and 1.5 cm vertically. No lymphadenopathy can be appreciated in the popliteal area or the groin.

**Assessment**
Staging for malignant cutaneous adnexal tumors is performed using the staging system for cutaneous squamous cell carcinoma.[6] This tumor is stage T2 since the tumor is greater than 2 cm in its greatest dimension. There are no involved lymph nodes or metastasis, so the patient is N0, M0. She would classify as stage II, since she is T2, N0, M0. The surgical oncology team relied on the biopsy report based on the sample that the podiatrist collected. There were no metastases.

**Plan**
Surgical management.

**Surgical Management**
The patient underwent wide excision of the chondroid syringoma of the right foot. She was brought to the operating room and administered general anesthesia, and the area was sterilized. An elliptical incision measuring 4 × 2 cm was fashioned and deepened through subcutaneous fat down to the underlying digital nerve and tendons. The lesion was excised and sent to pathology, and the subcuticular and skin approximated with suture. There were no surgical complications.

**Final Pathology**
Skin and soft tissue, clinically right foot, small focus (0.13 mm) of residual malignant chondroid syringoma, within margins of excision.

**Follow-Up and Outcomes**
Although little information is known about this rare type of tumor, the prognosis is poor.[2] Unfortunately, the

patient presented to her PCP 4 months postoperatively with continued surgical wound drainage. She was again seen 7 months postoperatively and was found to have continual wound drainage and infections, although there was no concern about regrowth of the mass as the tumor was completely removed.

## DISCUSSION

This case was a rare presentation of malignant chondroid syringoma of the foot. There are only three other published case reports of similar presentations. One case was the report of a 72-year-old male with a large malignant chondroid syringoma involving a toe, published in 2018 in China.[7] Another reported case was that of a 47-year-old female with a 20-year history of a mass on her left foot which was a malignant chondroid syringoma.[8] The final reported case was published in 2016 and was a report of a 43-year-old male with a malignant chondroid syringoma of the plantar aspect of the right foot.[8]

This case is interesting as it is a patient with a previous history of cancer presenting with a rare soft tissue malignancy of the foot. Previous research does not indicate that there is an increased risk of malignant chondroid syringoma in patients with a history of cancer.

As previous research shows, malignant chondroid syringoma is a rare entity. When present, it is usually located on the head and neck.[1] Therefore, this disease would be low on the differential diagnosis for this patient had a biopsy not been performed. In addition, a higher incidence of malignant adnexal tumors occurs in patients with germline mutations predisposing to such tumors.[9] Syndromes that may be associated with cutaneous adnexal tumors include Brooke-Spiegler syndrome and Cowden syndrome, among others.[9]

Surgery is currently the standard of care treatment for malignant chondroid syringomas, with wide local excision being recommended for extremity lesions. Radiation therapy should be reserved for patients in whom surgery is not an option or a postsurgical adjuvant treatment when surgical margins cannot be cleared.[10] Since lymph nodes are rarely involved, the role of sentinel lymph node biopsy is not recommended, as per a population-based study examining malignant cutaneous adnexal tumors from 1988 to 2006.[5] Local recurrence rates range from 10 to 50% among patients treated with wide local excision or Mohs micrographic surgery.[11] Routine postsurgical follow-up visits are advisable to monitor for recurrence.[12,13]

Limitations of this case include the absence of photographs of this case, along with the absence of histopathological staining. It is not known if this patient has any germline mutations, which is another limitation of this piece.

A literature review was performed on PubMed and on Google Scholar on April 6, 2018. There were 4618 hits for 'malignant chondroid syringoma' on PubMed, many of these were related to salivary gland tumors and pleomorphic adenomas. Another search was performed for 'malignant chondroid syringoma', excluding 'pleomorphic adenoma' and 'salivary gland', and it had 32 results. Of these, three reports were case studies of malignant chondroid syringoma of the foot.

## CONCLUSION

Soft tissue masses in the lower extremities including the feet may warrant biopsy in unexplained cases. Without biopsy, it is unlikely that the mass in this patient would have been diagnosed as malignant chondroid syringoma prior to surgery. Having the pathological diagnosis is important for determining treatment options, especially in someone who may have a history of cancer, requiring us to rule out metastasis versus primary cancer.

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