INTRODUCTION

- Sarcoma is a rare heterogenous disease that most commonly metastasizes to the lungs.
- Pulmonary metastasectomy is the only effective treatment to date in those with localized and resectable disease.
- Pulmonary metastases have a poor prognosis, with a 5-year survival rate of less than 20%, even after complete resection.
- Growth patterns of pulmonary metastases are unique and different from the primary sarcoma due to the nature of pulmonary tissue.
- Certain growth patterns of pulmonary metastases have been identified such as presence of interstitial growth, size of metastases, and pleural penetration.
- Radiologic findings have also been described such as presence of cavitation, calcification, and hemorrhage.
- With over 70 distinct subtypes of sarcoma, no comprehensive comparison of radiologic and histologic features of pulmonary metastases from individual subtypes exists.
- Given that resection is the best treatment option, histologic and radiologic features are important in determining resection margins and surgical approach.

PURPOSE

The purpose of this study is to define the radiologic and histologic characteristics of pulmonary metastases from individual sarcoma subtypes and their prognostic implications.

HYPOTHESIS

We hypothesize that each of the sarcoma subtypes will exhibit different radiologic and histologic characteristics which will have implications in prognosis and pulmonary metastasectomies.

METHODS

- Retrospective chart review
- Included all patients undergoing pulmonary metastasectomy for sarcoma metastases to the lungs at MGH between January 1992 to May 2019
- Clinical variables included histologic subtypes, disease free interval, resection margins
- Radiologic variables included size of tumor, # of nodules, cavitation, smooth borders, pleural abutment, ground glass halo, calcification
- Pathologic variables included spread through airway spaces, satellite nodules, visceral pleural invasion, perivascular growth, blood vessel invasion, cavitation
- Main outcomes: disease-free interval (DFI), survival, recurrence

PRELIMINARY RESULTS

- 471 pulmonary metastasectomies for sarcoma identified
- Results include 71 cases = 57 patients

CONCLUSIONS

- Different sarcoma subtypes may have different radiologic and histologic features
- Such factors could play an important role in determining patient prognosis, risk of recurrence and help in the discussion of treatment options
- Limitations: small sample size therefore all results are preliminary only

REFERENCES