Poster #23 | Treatment efficacy of aromatase inhibitors for leiomyosarcoma of the uterus

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Topic: Uterine

Objectives
The objective of this study was to assess whether Aromatase Inhibitors (AIs) improve overall and survival in patients with Uterine Leiomyosarcoma (uLMS).

Methods
We conducted an institutional review board-approved, retrospective cohort study at Kaiser Permanente, Riverside Medical Center. All patients who received a diagnosis of uLMS on pathology from 2012-2021 were reviewed. Demographics and outcomes were compared between patients that received AIs versus those that did not.

Results
The study included a total 17 patients with uLMS, including five who received an AI (29%). A Log-rank (Mantel-Cox) test demonstrated a significant difference in Overall Survival (OS) between patients who received Anastrozole versus patients who did not receive hormonal treatment, $p = 0.0305$, Hazard Ratio (HR) 0.165, 95% Confidence Interval (CI) [0.032, 0.844] (Figure 1).

Conclusions
Uterine leiomyosarcoma (uLMS) is a rare and aggressive malignancy that generally portends a poor prognosis. Generally speaking, surgical therapy is the standard of care for early-stage disease. Despite complete resection of the tumor, the risk of recurrence of leiomyosarcoma remains high due to its high-grade histopathology. Hormonal therapy has been successful in decreasing rates of recurrence and improving survival in a subset of patients with uLMS. More specifically, Aromatase Inhibitors (AIs) have been utilized as post-operative adjuvant therapy for patients with Estrogen Receptor (ER) and Progesterone Receptor (PR) positive stage I uLMS and for patients with recurrent, metastatic and unresectable disease. Our study demonstrates that there may be a role for AIs in the treatment of uLMS. Due to its high recurrence rate and low response to chemotherapy and radiation, other forms of treatment need to be explored and identified.

Abstract Table or Graph
Figure 1: Kaplan–Meier survival curve comparing the overall survival, in years, of patients with uterine leiomyosarcoma who received Anastrozole versus those who did not. Data are represented as $p = 0.0305$, Hazard Ratio (HR) $0.165$, 95% Confidence Interval (CI) $[0.032, 0.844]$. Statistical significance was analyzed using a Log-rank (Mantel-Cox) test and a Mantel-Haenszel Hazard Ratio test. A $p$-value of $<0.05$ was deemed significant (ns non-significant).