



Survival Outcomes According to Molecular Classification of Uterine Carcinosarcoma

Michael D. Toboni, MD, MPH¹, Kaitlyn Kincaid, MD¹, Sharon Wu, PhD², Tyler Mattox, PhD², Matthew J. Oberley, MD², Premal H. Thaker, MD³, Matthew A. Powell, MD³, Nathaniel Jones, MD⁴

1. University of Alabama at Birmingham, Division of Gynecologic Oncology 2. Caris Life Sciences 3. Washington University in St. Louis, Division of Gynecologic Oncology 4. University of South Alabama, Division of Gynecologic Oncology

Background:

- Uterine carcinosarcoma (UCS) is an aggressive cancer with a poor prognosis.
- There are limited studies evaluating the molecular stratification of UCS or its association with survival outcomes.
- No survival comparisons exist between UCS and endometrioid endometrial cancer (EEC) according to molecular classification.

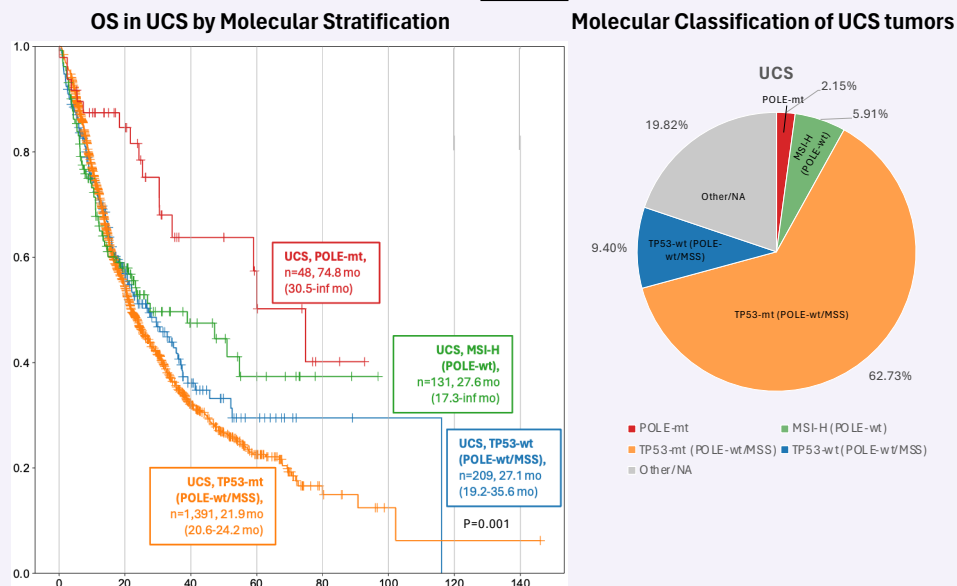
Objectives:

- Stratify UCS tumors by ProMisE criteria
- Determine if molecular sub-types predict survival in UCS
- Compare outcomes stratified by molecular subtype between EEC and UCS

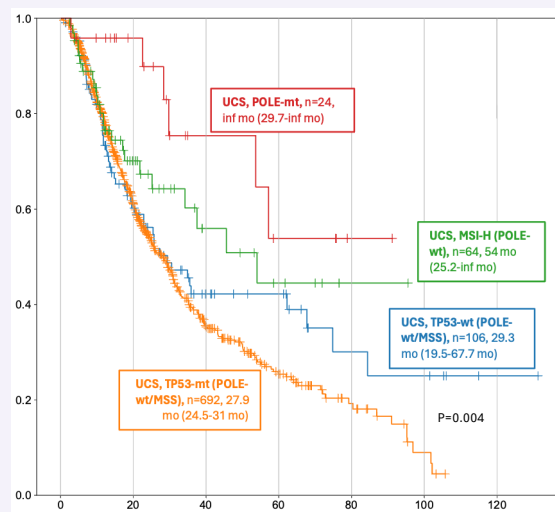
Methods:

- 2,235 UCS and 6,469 EEC tumors were analyzed using next-generation sequencing (NGS) by Caris Life Sciences
- Microsatellite instability (MSI) was tested by IHC and NGS
- Real-world overall survival (rwOS) obtained from insurance claims data and calculated from first treatment to last contact. Hazard ratio (HR) was calculated by Cox proportional hazards, with p-value calculated using log-rank test.

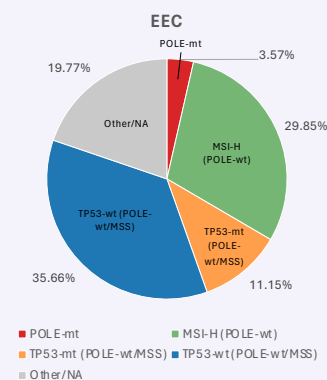
Results



OS in UCS by Molecular Stratification after C/P

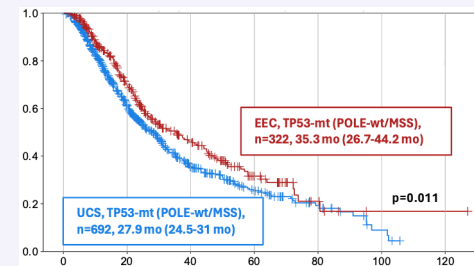


Molecular Classification of EEC Tumors

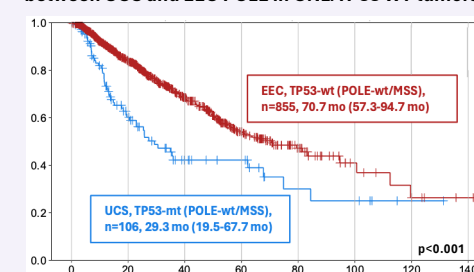


Results

Post Chemotherapy Overall Survival Comparison between UCS and EEC POLE in CNH/TP53 MT tumors



Post Chemotherapy Overall Survival Comparison between UCS and EEC POLE in CNL/TP53 WT tumors



Conclusion

- CNH/TP53 MT is the most common molecular subtype in UCS
- Tiered survival between UCS sub-types mirror EEC survival patterns
- POLE MT and MSI-H have equivalent outcomes when comparing UCS and EEC, even though UCS is considered a more aggressive histology
- CNL/TP53 WT (and CNH/TP53 MT) have worse outcomes in UCS cohort compared to EEC cohort
- This is the first study to report molecular classification of UCS with clinical outcomes compared to an EEC cohort