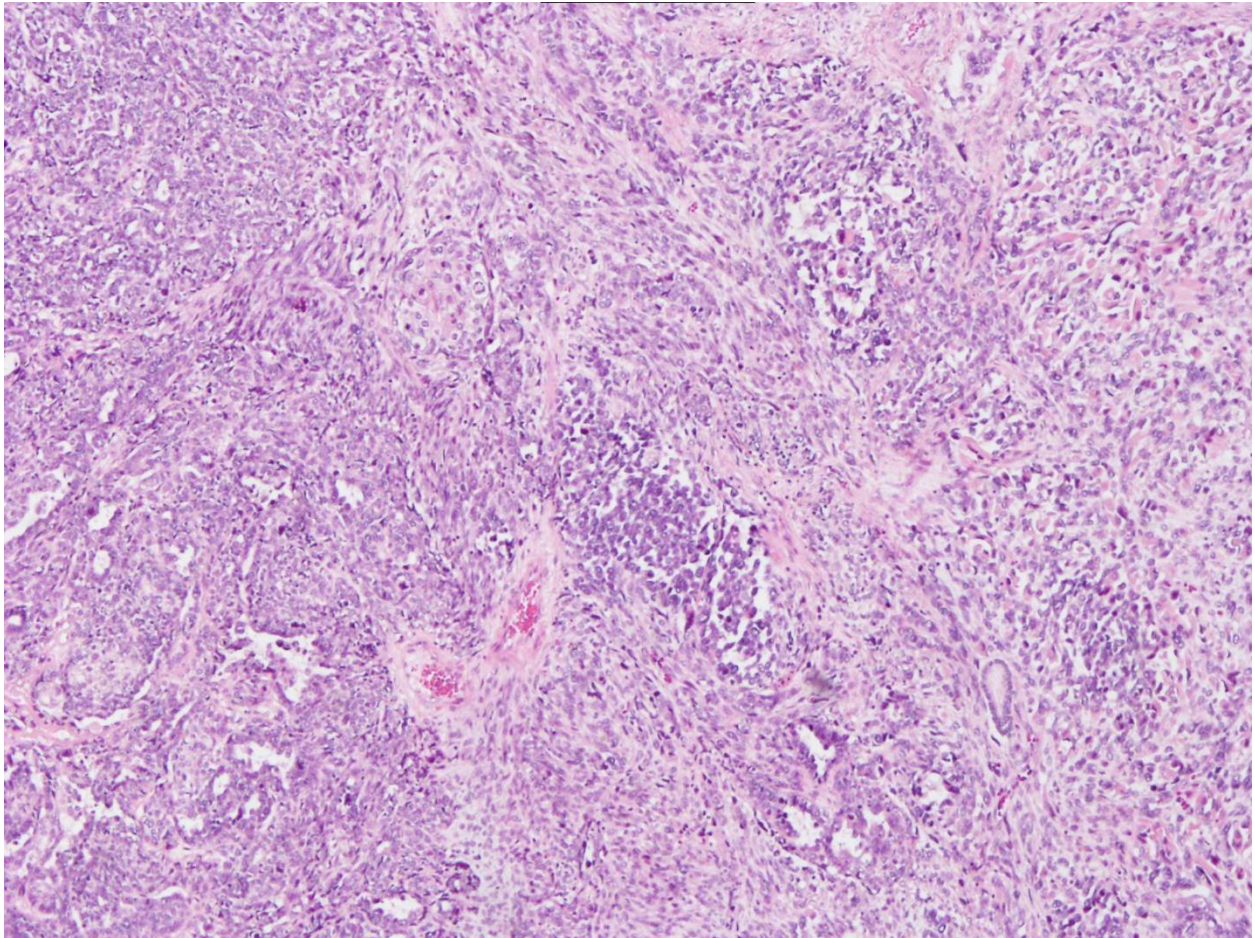
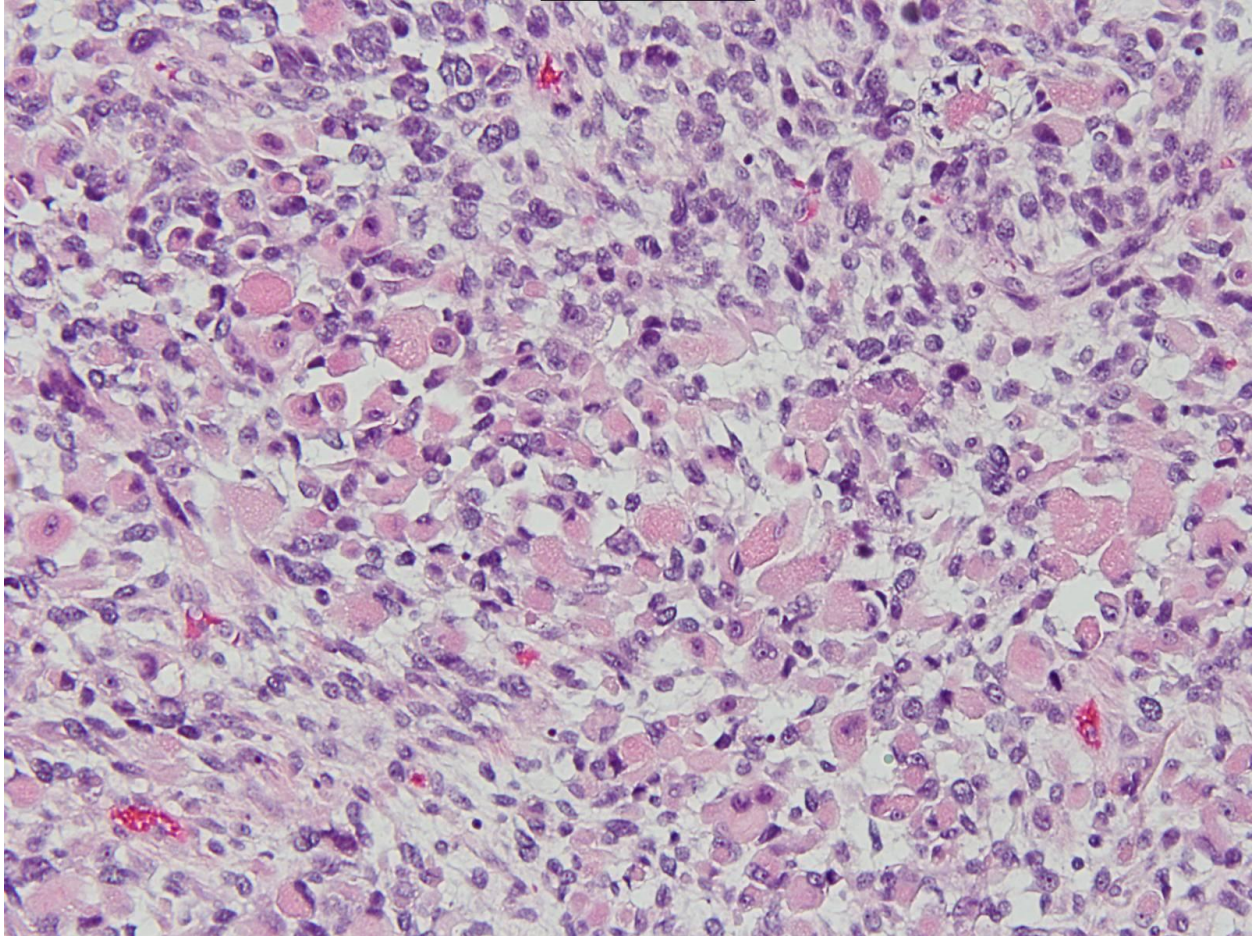
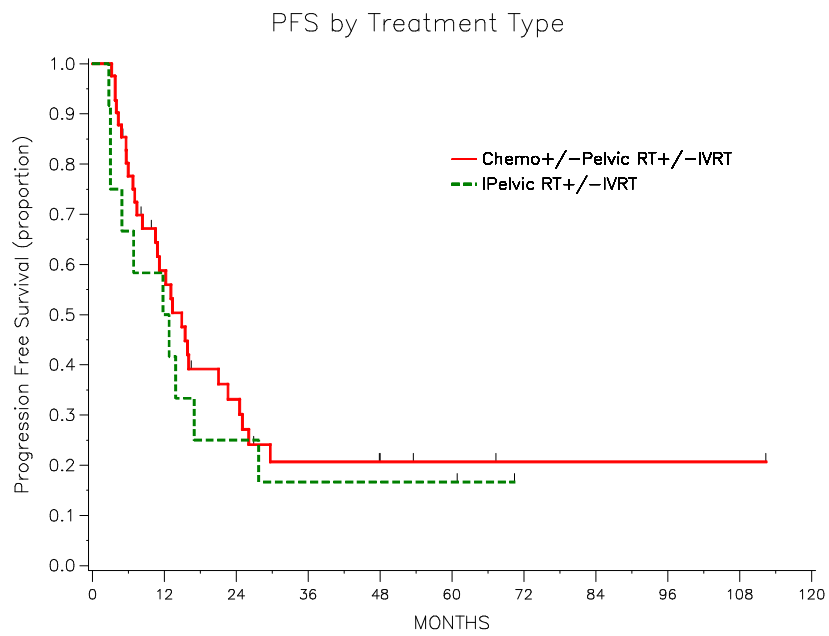


Supplementary Figure 1. Uterine Carcinosarcoma with RMS Differentiation- Low Power H and E Section.



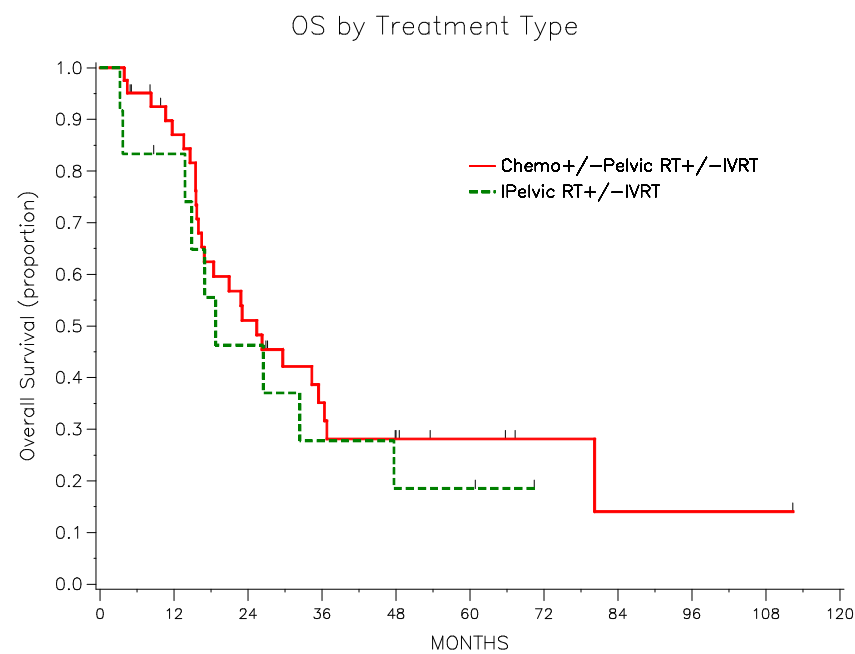
Supplementary Figure 2. High Power H and E View of Rhabdomyoblasts.



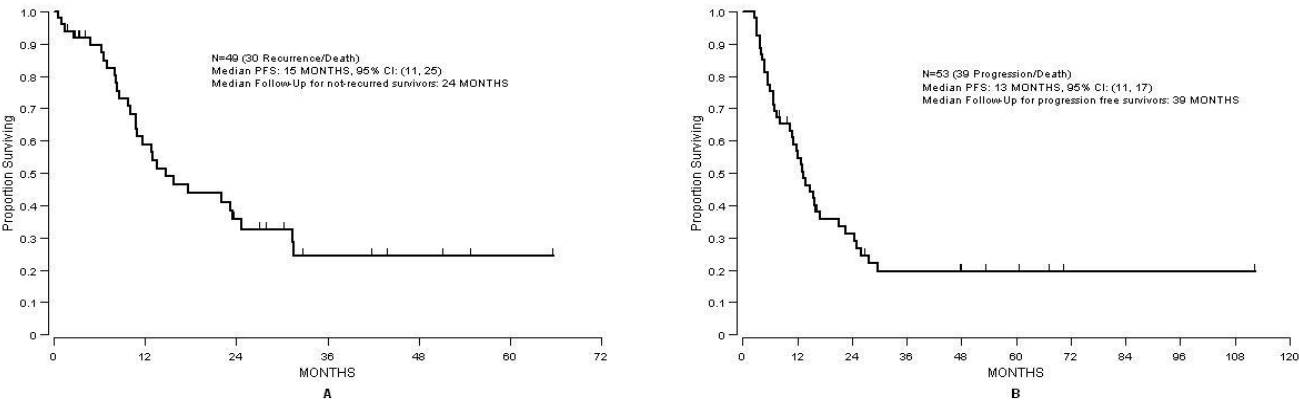


Supplementary Figure 3. Progression-free survival stratified by treatment (N=53).

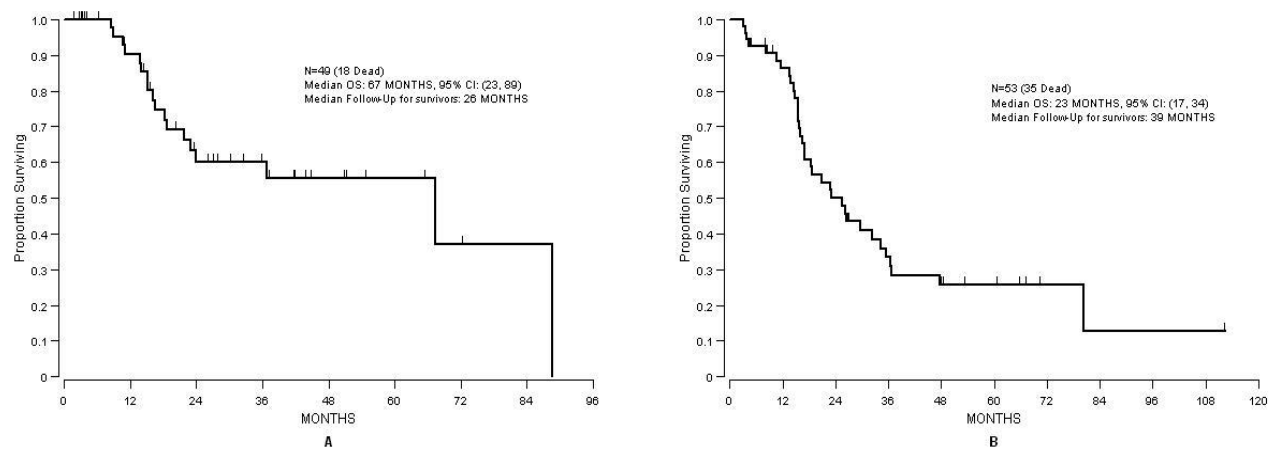
Supplementary Figure 4. Overall survival stratified by treatment (N=53).



Supplementary Figure 5. Side by Side Comparison of Progression-Free Survival between UCS without RMS (A) and UCS with RMS (B).



Supplementary Figure 6. Side by Side Comparison of Overall Survival between UCS without RMS (A) and UCS with RMS (B).



Supplementary Table 1. Toxicity by treatment type.

Toxicity	Chemotherapy±RT±IVRT			RT ±IVRT alone		
	(n= 41 patients)			(n= 12 patients)		
	<u>Grade</u>			<u>Grade</u>		
	2	3	4	2	3	4
Anorexia	1	0	0	1	0	0
Constipation	2	0	0	0	0	0
Cystitis	0	0	0	1	0	0
Diarrhea	3	0	0	4	0	0
Dyapareunia	0	0	0	0	0	0
Fatigue	7	1	0	3	0	0
Myalgias/Arthralgias	1	0	0	0	0	0
Nausea/Vomiting	2	0	0	2	0	0
Neutropenia	2	2	1	0	0	0
Peripheral Neuropathy	3	0	0	0	0	0
Proctitis	0	0	0	1	0	0
Pyrexia	2	0	0	0	0	0
Renal	1	0	0	0	0	0
Skin	0	1	0	1	0	0

Abbreviations: Chemotherapy±RT±IVRT, chemotherapy plus or minus pelvic radiation therapy plus or minus intravaginal radiation therapy; RT±IVRT alone, pelvic radiation therapy plus or minus intravaginal radiation therapy; n=total number of cases in each group.

Supplementary Table 2. Patterns of First Recurrence.

Site(s) of recurrence *	Chemotherapy+/-RT+/-IVRT (n=41)	RT alone (n=12)
Abdomen	18 (43.9%)	5 (41.6%)
Bone	4 (9.7%)	0 (0%)
Brain	1 (2.4%)	0 (0%)
Lung	7 (17.1%)	5 (41.6%)
Mediastinal LN	3 (7.3%)	2 (16.6%)
Pelvic LN	1 (2.4%)	1 (8.3%)
Pelvis	15 (36.5%)	2 (16.6%)
Vagina	2 (4.8%)	0 (0%)

Abbreviations: Chemotherapy+/-RT+/-IVRT, chemotherapy plus or minus pelvic radiation therapy plus or minus intravaginal radiation therapy; RT alone, pelvic radiation therapy plus or minus intravaginal therapy; LN, Lymph node(s)

* Some patients had multiple sites of recurrence.

Supplementary Table 3. Cross Study Comparison of PFS and OS in Chemotherapy Treated Patients

	MSKCC UCS without RMS Study (n= 38)	MSKCC UCS with RMS Study (n= 41)
Median PFS	15 months 95% CI: (11, 25)	13 months, 95% CI: (11, 17)
Median OS	67 months, 95% CI: (23, 89	23 months, 95% CI: (17, 34)
Stage I/II patients	13	12
Stage III/IV patients	25	29