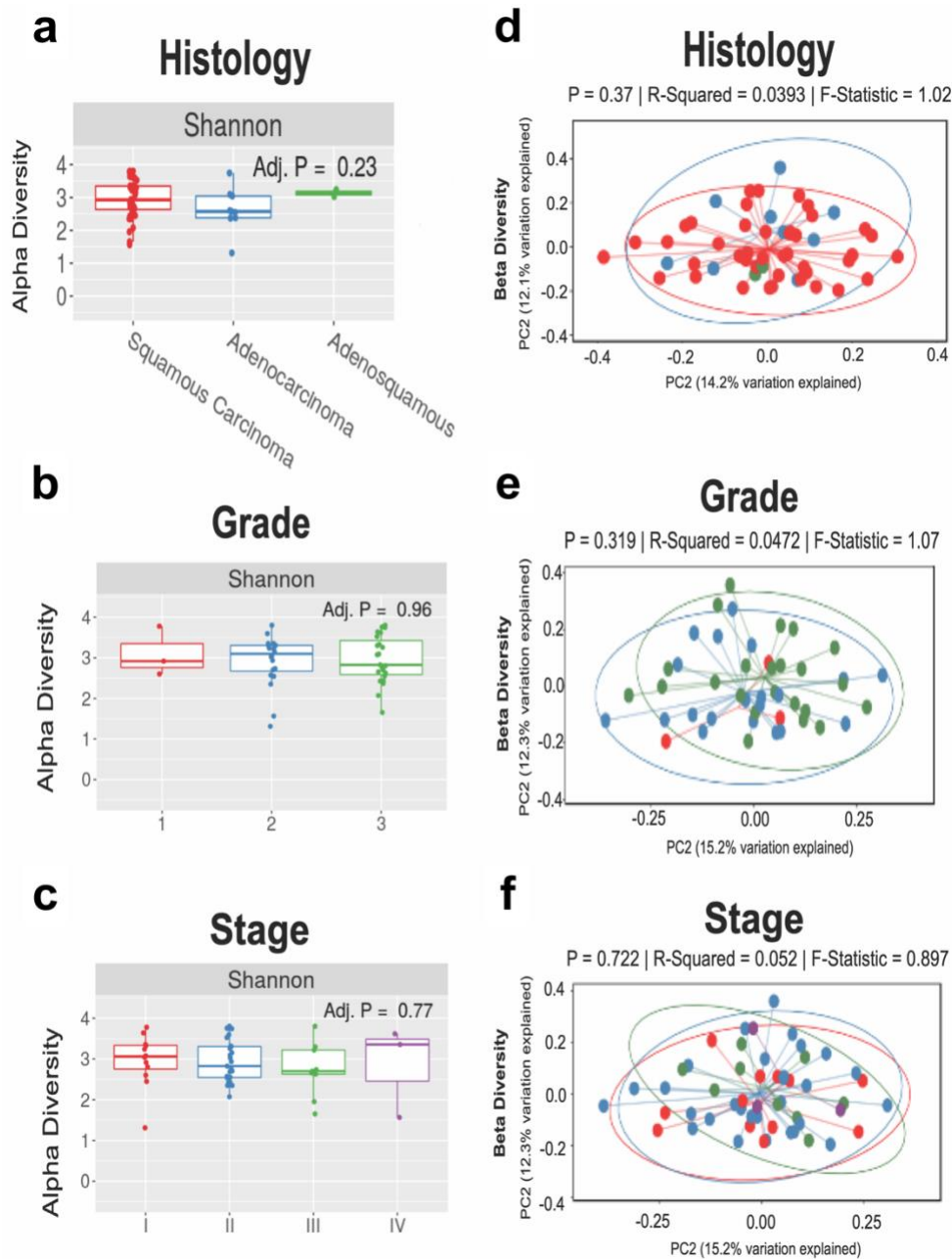
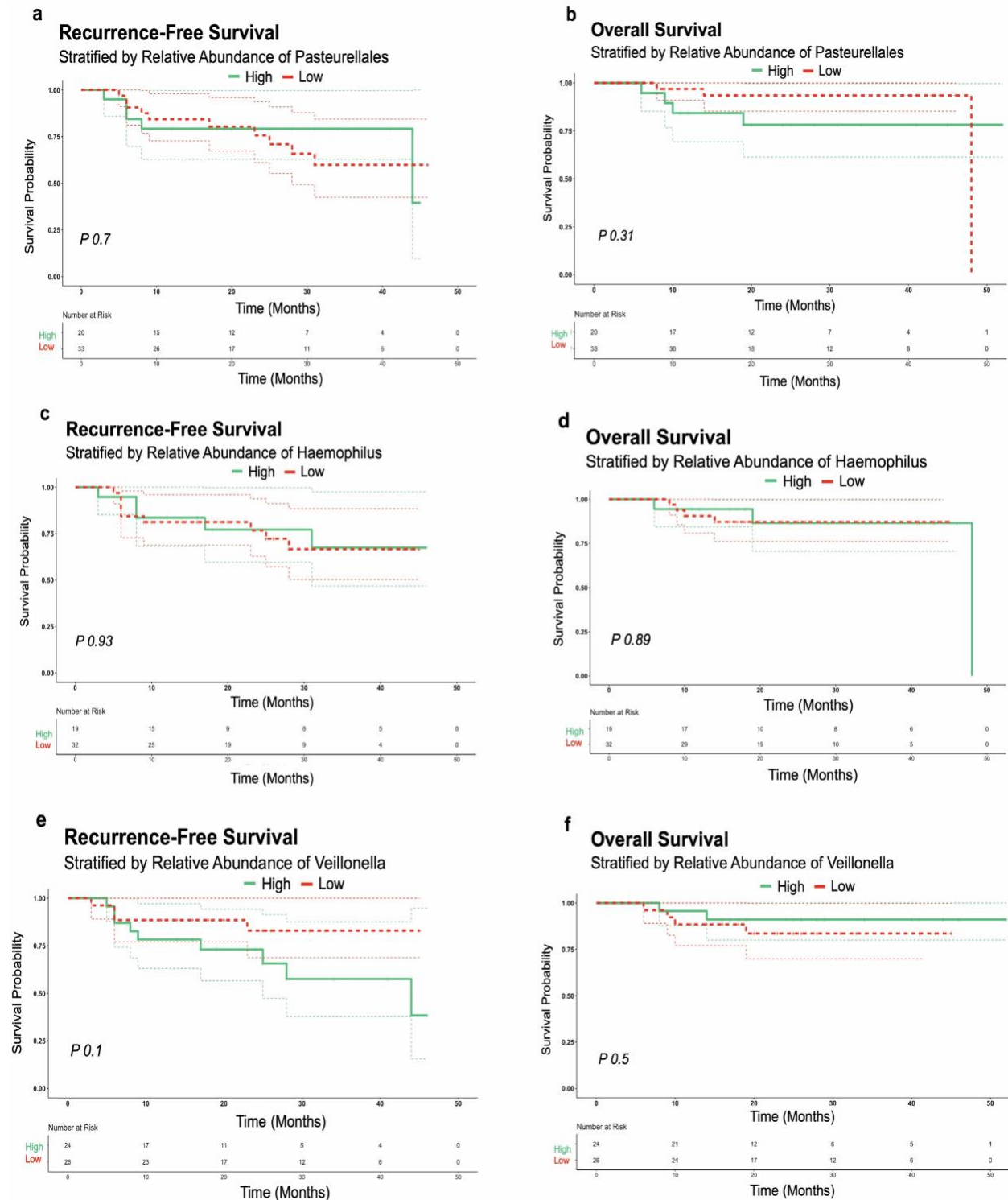




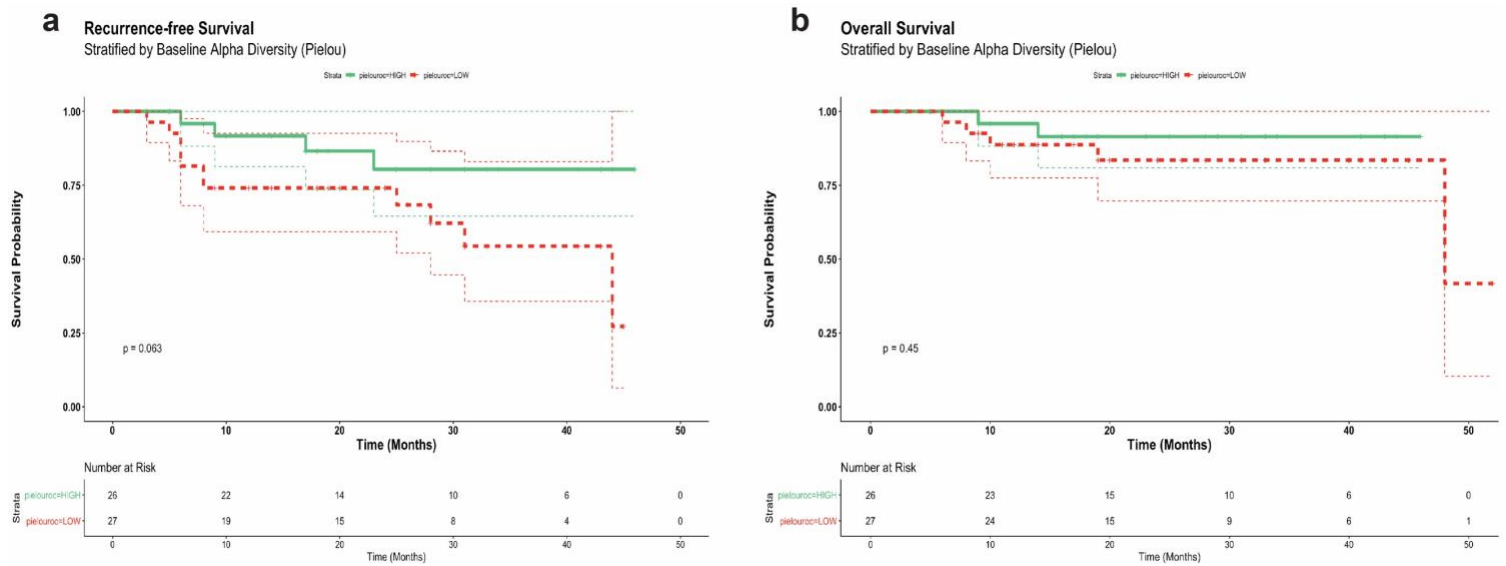
Supplemental Fig 1. The fecal microbiota of individuals with cervical cancer.

The fecal microbiota of individuals with cervical cancer by demographics. Alpha diversity (within sample diversity) was measured using the Shannon diversity metric and Beta diversity (between sample diversity) was determined by unweighted Unifrac. No differences were observed in either metric by cancer histology (A,D), grade (B,E) or cancer stage (C,F).



Supplemental Fig 2. Kaplan-Meier curves recurrence free and overall survival stratified by relative abundance of *Pasteurellales*, *Haemophilus*, and *Veillonella*.

Kaplan-Meier curves for (A) recurrence free survival, (B) overall survival stratified by relative abundance of *Pasteurellales*. Kaplan-Meier curves for (C) recurrence free survival, (D) overall survival stratified by relative abundance of *Haemophilus*. Kaplan-Meier curves for (E) recurrence free survival, (F) overall survival stratified by relative abundance of *Veillonella*. Cases represent patients.



Supplemental Fig 3. Relationship between survival and alpha diversity (Pielou).

Kaplan-Meier curves for (A) recurrence free survival, (B) overall survival stratified by high and low alpha diversity (Pielou). Cases represent patients.

Supplemental Table 1. Patient and tumor characteristics (N=55)

	N	(%)
Median age, yrs (range)	48 (28-72)	—
BMI, Mean (SD), kg/m2	28.7(6.06)	—
Race/Ethnicity		
Asian	2	(3.6)
Black	4	(7.3)
Hispanic	24	(43.6)
White	24	(43.6)
Other	1	(1.8)
FIGO Stage		
IA1	1	(1.8)
IA2	0	(0)
IB1	5	(9.09)
IB2	6	(10.9)
IIA	3	(5.45)
IIB	28	(50.9)
IIIA	9	(16.3)
IIIB	0	(0)
IVA	3	(5.45)
IVB	0	(0)
Grade		
Well	4	(7.2)
Moderate	20	(36.3)
Poor	25	(45.4)
Unknown	6	(10.9)
Histology		
Squamous	43	(78.1)
Adenocarcinoma	8	(18.1)
Adenosquamous	3	(3.63)
Node Level on PET		
Common Iliac	9	(16.3)
External Iliac	23	(41.8)
Internal Iliac	5	(9.09)
Para-Aortic	3	(5.45)

None	15	(27.2)
Median cervical tumor size (cm)	5.4	—
Smoking status		
Current	4	(7.27)
Former	20	(36.3)
Never	31	(56.3)
Antibiotic Use		
No	14	(25.5)
Yes	41	(74.5)
Brachytherapy		
HDR	21	(38.2)
PDR	34	(61.8)
Concurrent Chemotherapy (cycles)		
<i>Cisplatin</i>		
(1-3)	2	(3.6)
(≥4)	51	(92.7)
<i>Carboplatin</i>		
(2)	1	(1.8)
<i>Carboplatin + Cisplatin</i>		
(2)+(2)	1	(1.8)

BMI, Body Mass Index; *FIGO*, International Federation of Gynecology and Obstetrics; *PET*, Pulsed Dose Rate; *HDR*, High Dose Rate ; *PDR*, Pulsed Dose Rate

Supplemental Table 2. Univariate Cox regression analysis for recurrence-free survival – Alpha Diversity all time points

Characteristics	Univariate model	
	HR (95% CI)	<i>P</i> value
Observed OTU		
Baseline	0.99 (0.97-1)	0.21
Week 1	1 (0.97-1)	0.69
Week 3	0.99 (0.96-1)	0.59
Week 5	1 (0.98-1)	0.71
Week 12	1 (0.98-1)	0.77
Shannon		
Baseline	0.51 (0.23-1.1)	0.087
Week 1	0.94 (0.2-4.4)	0.94
Week 3	1.2 (0.25-5.6)	0.83
Week 5	0.83 (0.35-1.9)	0.66
Week 12	2.7 (0.13-57)	0.51
Simpson		
Baseline	0.025 (0.00036-1.7)	0.087
Week 1	13 (1.4e-05-1.2e+07)	0.13
Week 3	52 (6.6e-05-4.1e+07)	0.57
Week 5	0.31 (0.013-7.8)	0.48
Week 12	130000 (7.5e-13-2.2e+22)	0.56
Inverse Simpson		
Baseline	0.93 (0.84-1)	0.11
Week 1	0.96 (0.79-1.2)	0.69
Week 3	1 (0.95-1.1)	0.34
Week 5	1 (0.92-1.2)	0.54
Week 12	1.1 (0.81-1.4)	0.59
Fisher		
Baseline	0.95 (0.88-1)	0.23
Week 1	0.97 (0.86-1.1)	0.66
Week 3	0.96 (0.83-1.1)	0.6
Week 5	1 (0.91-1.2)	0.69
Week 12	1 (0.89-1.2)	0.81

CI, Confidence interval; *HR*, hazard ratio; *OTU*, operational taxonomic units.

*Significant hazard ratios.

‡Significant *P* value <0.05.

Supplemental Table 3. Univariate Cox regression analysis for overall survival – Alpha Diversity all time points

Characteristics	Univariate model	
	HR (95% CI)	<i>P</i> value
Observed OTU		
Baseline	0.98 (0.95-1)	0.14
Week 1	0.98 (0.94-1)	0.35
Week 3	0.97 (0.92-1)	0.21
Week 5	1 (0.96-1)	0.98
Week 12	NA (NA-NA)	1
Shannon		
Baseline	0.34 (0.1-1.1)	0.08
Week 1	0.48 (0.063-3.7)	0.48
Week 3	1.2 (0.25-5.6)	0.83
Week 5	0.23 (0.037-1.4)	0.11
Week 12	NA (NA-NA)	1
Simpson		
Baseline	0.0059 (1.2e-05-2.9)	0.1
Week 1	0.45 (1.1e-08-1.8e+07)	0.93
Week 3	0.009 (1.7e-07-490)	0.4
Week 5	1.4 (0.00063-3200)	0.93
Week 12	NA (NA-NA)	1
Inverse Simpson		
Baseline	0.85 (0.7-1)	0.13
Week 1	0.86 (0.62-1.2)	0.39
Week 3	0.81 (0.61-1.1)	0.15
Week 5	0.89 (0.66-1.2)	0.46
Week 12	NA (NA-NA)	1
Fisher		
Baseline	0.91 (0.79-1)	0.15
Week 1	0.91 (0.74-1.1)	0.34
Week 3	0.84 (0.64-1.1)	0.22
Week 5	0.99 (0.79-1.3)	0.94
Week 12	NA (NA-NA)	1

CI, Confidence interval; *HR*, hazard ratio; *OTU*, operational taxonomic units.

*Significant hazard ratios.

‡Significant *P* value <0.05.

Supplemental Table 4. Types of Antibiotics Taken by Study Participants During the Study Period

Type of antibiotic	Number of patients (N=41) N(%)
Trimethoprim / Sulfamethoxazole	19 (46.3)
Ciprofloxacin	10 (24.4)
Levofloxacin	4 (9.8)
Metronidazole	7 (17.1)
Amoxicillin / Clavulanic acid	3 (7.3)
Nitrofurantoin	2 (4.9)
Cefepime	2 (4.9)
Azithromycin	1 (2.4)
Bacitracin	1 (2.4)
Ampicillin / Sulbactam	1 (2.4)
Vancomycin	1 (2.4)
Cefpodoxime	1 (2.4)
Cefazolin	1 (2.4)
Amoxicillin	1 (2.4)
Piperacillin / Tazobactam	1 (2.4)
Vibramycin	1 (2.4)