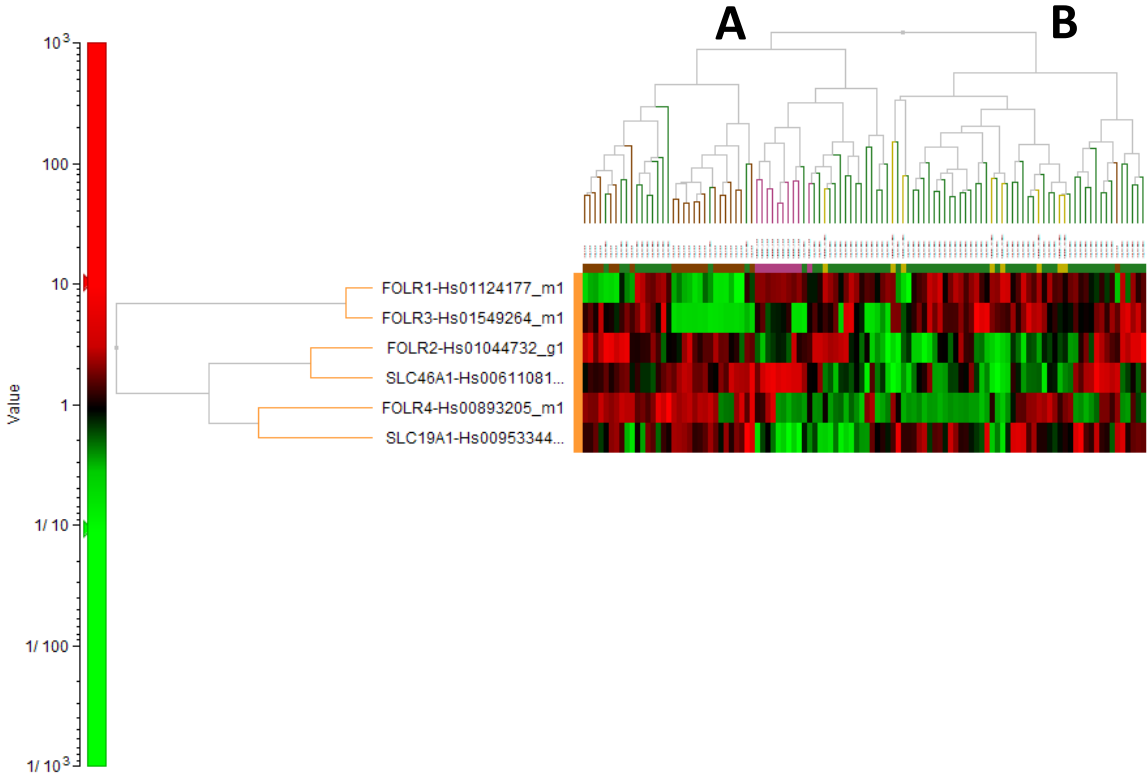
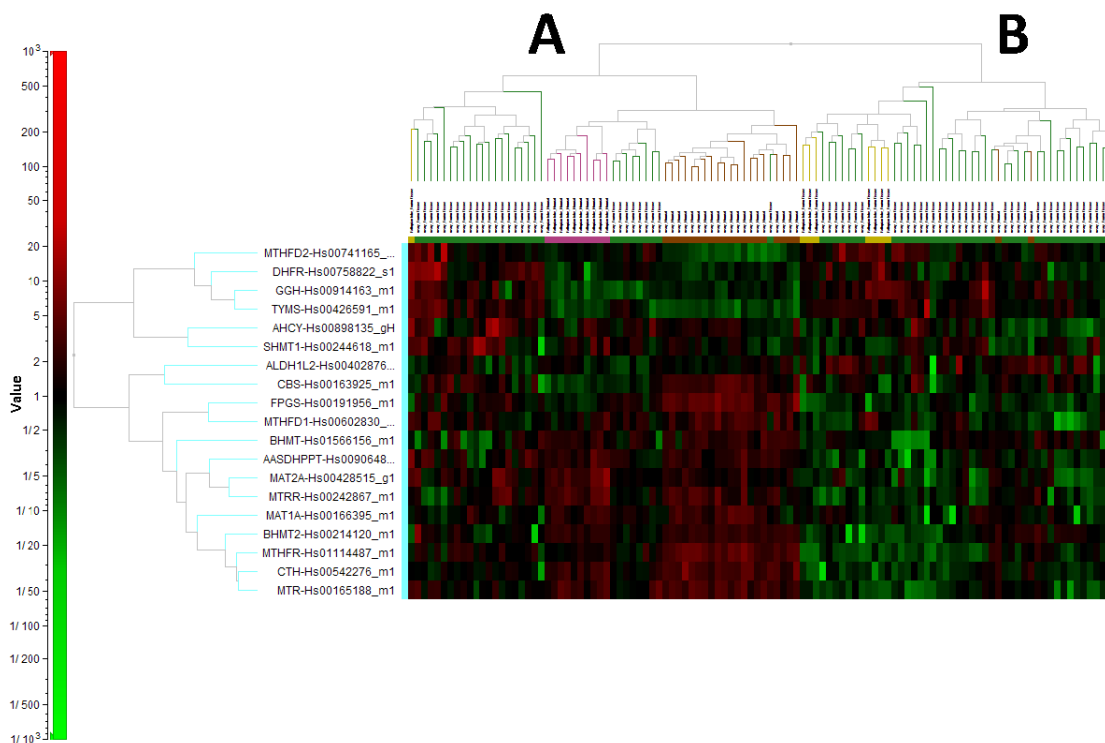


# Supplementary Information

**Figure S1.** 2D Hierarchical Clustering as it relates to the 6 folate transporter/receptor genes. Analysis showed that Cluster A contained 27/68 EOCs (green), 21/22 ON (brown), 1/8 FA cells (pink) and all (10/10) FN (yellow). Cluster B contained 41/68 EOC (green), 1/22 ON (brown) and 7/8 FA.



**Figure S2.** 2D Hierarchical Clustering of genes related to 1-carbon cycle metabolism and folate homeostasis. EOCs cluster more closely with FA tissue than with ON or FN, with regard to the 17 genes involved in 1-carbon cycle metabolism. Two clusters were observed: Cluster A was comprised of 29/68 EOCs, 20/22 ON, 1/8 FA and 10/10 FN; Cluster B was comprised of 39/68 EOCs, 2/22 ON tissues and 7/8 FA.



**Table S1.** Gene Classifications Gene name and Description.

Classification	Gene	Description
Folate Transporters	FOLR1-Hs01124177_m1	folate receptor 1 (adult) (FRA)
	FOLR2-Hs01044732_g1	folate receptor 2 (fetal)
	FOLR3-Hs01549264_m1	folate receptor 3 (gamma)
	FOLR4-Hs00893205_m1	folate receptor 4 (delta) homolog (mouse)
	SLC19A1-Hs00953344_m1	solute carrier family 19 (folate transporter) (PCFT)
	SLC46A1-Hs00611081_m1	solute carrier family 46 (folate transporter) (RFC)
Known EOC Markers	EPCAM-Hs00158980_m1	epithelial cell adhesion molecule
	CALD1-Hs00921982_m1	caldesmon 1
	CLDN3-Hs00265816_s1	claudin 3
	CLDN7-Hs00600772_m1	claudin 7
	CP-Hs00236810_m1	ceruloplasmin (ferroxidase)
	KRT7-Hs00559840_m1	keratin 7
	MUC16-Hs01065189_m1	mucin 16 (CA-125)
	MUC1-Hs00159357_m1	mucin 1
	PAX8-Hs00247586_m1	paired box 8 [Gene h (CG26667 Celera Annotation)]
	SLC34A2-Hs00197519_m1	solute carrier family 34 (sodium phosphate)
	TMPRSS3-Hs00225161_m1	transmembrane protease
	WFDC2-Hs00899484_m1	WAP four-disulfide core domain 2 (HE4)
MSLN-Hs00245879_m1	mesothelin	

Table S1. Cont.

Classification	Gene	Description
<b>One-Carbon Metabolism and folate homeostasis</b>	GGH-Hs00914163_m1	gamma-glutamyl hydrolase (conjugase)
	FPGS-Hs00191956_m1	folypolyglutamate synthase
	AASDHPPT-Hs00906486_m1	aminoadipate-semialdehyde dehydrogenase-phosphopantetheinyl transferase
	AHCY-Hs00898135_gH	adenosylhomocysteinase
	ALDH1L2-Hs00402876_m1	aldehyde dehydrogenase 1 family
	BHMT2-Hs00214120_m1	betaine--homocysteine S-methyltransferase 2
	BHMT-Hs01566156_m1	betaine--homocysteine S-methyltransferase
	CBS-Hs00163925_m1	cystathionine-beta-synthase
	CTH-Hs00542276_m1	cystathionase (cystathionine gamma-lyase)
	DHFR-Hs00758822_s1	dihydrofolate reductase
	MAT1A-Hs00166395_m1	methionine adenosyltransferase I
	MAT2A-Hs00428515_g1	methionine adenosyltransferase II
	MTHFD1-Hs00602830_m1	methylenetetrahydrofolate dehydrogenase (NADP+ dependent) 1
	MTHFD2-Hs00741165_m1	methenyltetrahydrofolate cyclohydrolase
	MTHFR-Hs01114487_m1	methylenetetrahydrofolate reductase (NAD(P)H)
	MTR-Hs00165188_m1	5-methyltetrahydrofolate-homocysteine methyltransferase
	MTRR-Hs00242867_m1	5-methyltetrahydrofolate-homocysteine methyltransferase reductase
SHMT1-Hs00244618_m1	serine hydroxymethyltransferase 1 (soluble)	
TYMS-Hs00426591_m1	thymidylate synthetase	
<b>Steroid Receptors</b>	ESR1-Hs00174860_m1	estrogen receptor 1
	AR-Hs00907244_m1	androgen receptor
	PGR-Hs01556707_m1	progesterone receptor
<b>Signal Transduction</b>	EGFR-Hs01076078_m1	epidermal growth factor receptor (erb-b1)
	ERBB2-Hs01001580_m1	v-erb-b2 erythroblastic leukemia viral oncogene homolog 2
	ERBB3-Hs00176538_m1	v-erb-b2 erythroblastic leukemia viral oncogene homolog 3 (avian)
	ERBB4-Hs00955525_m1	v-erb-a erythroblastic leukemia viral oncogene homolog 4 (avian)
	MAPK1-Hs01046830_m1	mitogen-activated protein kinase 1
	MAPK3-Hs00385075_m1	mitogen-activated protein kinase 3
	MAPK4-Hs00177074_m1	mitogen-activated protein kinase 4
	MAPK6-Hs00833126_g1	mitogen-activated protein kinase 6
	MAPK7-Hs00611114_g1	mitogen-activated protein kinase 7
	MAPK8-Hs01548508_m1	mitogen-activated protein kinase 8
	MAPK9-Hs00177102_m1	mitogen-activated protein kinase 9
	MAPK10-Hs00373461_m1	mitogen-activated protein kinase 10
	MAPK11-Hs00177101_m1	mitogen-activated protein kinase 11
	MAPK12-Hs00268060_m1	mitogen-activated protein kinase 12
	MAPK13-Hs00559623_m1	mitogen-activated protein kinase 13
	MAPK14-Hs00176247_m1	mitogen-activated protein kinase 14
	MAPK15-Hs00933429_m1	mitogen-activated protein kinase 15
PDGFRB-Hs01019589_m1	platelet-derived growth factor receptor	
PRKCA-Hs00925195_m1	protein kinase C	

Table S1. Cont.

Classification	Gene	Description
	ANXA2-Hs00743063_s1	annexin A2
	CPE-Hs00175676_m1	carboxypeptidase E (Gene hCG15254 Celera Annotation)
	DDR1-Hs00233612_m1	discoidin domain receptor tyrosine kinase 1
	DHCR24-Hs00207388_m1	24-dehydrocholesterol reductase
	DSG2-Hs00170071_m1	desmoglein 2
	DST-Hs00156137_m1	dystonin
	GNB2L1-Hs00272002_m1	guanine nucleotide binding protein (G protein)
	JAM3-Hs00230289_m1	junctional adhesion molecule 3
	KIT-Hs00174029_m1	v-kit Hardy-Zuckerman 4 feline sarcoma viral oncogene homolog
	LAPTM4B-Hs00363282_m1	lysosomal protein transmembrane 4 beta
	LSR-Hs00210880_m1	lipolysis stimulated lipoprotein receptor
	MAF-Hs00193519_m1	v-maf musculoaponeurotic fibrosarcoma oncogene homolog (avian)
	RCAN2-Hs00195165_m1	regulator of calcineurin 2
	ST14-Hs01058386_m1	suppression of tumorigenicity 14 (colon carcinoma)
	UCP2-Hs01075227_m1	uncoupling protein 2 (mitochondrial)
Miscellaneous Genes	ZEB2-Hs00207691_m1	zinc finger E-box binding homeobox 2
	ARID1A-Hs00195664_m1	AT rich interactive domain 1A (SWI-like)
	ATIC-Hs00269671_m1	5-aminoimidazole-4-carboxamide ribonucleotide formyltransferase/IMP cyclohydrolase
	ERCC1-Hs01012158_m1	excision repair cross-complementing rodent repair deficiency
	NR3C1-Hs00353740_m1	nuclear receptor subfamily 3
	TP53-Hs01034249_m1	tumor protein p53
	TYMP-Hs00157317_m1	thymidine phosphorylase
	PDZRN3-Hs00392900_m1	PDZ domain containing ring finger 3
	ATP7A-Hs00921963_m1	ATPase
	ATP7B-Hs00163739_m1	ATPase
	GCLC-Hs00155249_m1	glutamate-cysteine ligase
	GPX1-Hs00829989_gH	glutathione peroxidase 1
	GSR-Hs00167317_m1	glutathione reductase
	SLC31A1-Hs00977268_g1	solute carrier family 31 (copper transporters)
	SLC31A2-Hs00156984_m1	solute carrier family 31 (copper transporters)

**Table S2.** Comparisons of gene expression data for EOC vs. NAT and EOC vs. ON.

Classification	Gene	EOC vs. NAT		EOC vs. ON	
		p-Value	FC	p-Value	FC
<b>Folate Transporters</b>	FOLR1-Hs01124177_m1	9.01E-05	7.0019	2.15E-16	113.3125
	FOLR2-Hs01044732_g1	1.59E-04	0.4938	1.49E-02	0.6214
	FOLR3-Hs01549264_m1	3.28E-04	5.4172	8.02E-07	12.9628
	FOLR4-Hs00893205_m1	2.29E-01	0.4009	2.05E-04	0.0411
	SLC19A1-Hs00953344_m1	1.00E-10	2.2532	1.80E-01	0.8491
	SLC46A1-Hs00611081_m1	3.00E-02	0.7413	9.15E-05	0.5821
<b>Known EOC Markers</b>	PAX8-Hs00247586_m1	3.69E-06	8.6672	2.78E-13	113.4982
	SLC34A2-Hs00197519_m1	2.80E-06	10.3426	2.79E-16	179.0069
	TMPRSS3-Hs00225161_m1	9.44E-12	30.0421	2.12E-19	91.2426
	CALD1-Hs00921982_m1	5.47E-16	0.2104	8.12E-20	0.1378
	CLDN3-Hs00265816_s1	3.62E-07	6.1418	2.17E-28	103.9800
	CLDN7-Hs00600772_m1	1.32E-09	7.6330	1.57E-26	68.5804
	CP-Hs00236810_m1	7.58E-07	10.9917	4.80E-16	157.7167
	EPCAM-Hs00158980_m1	2.11E-10	7.2228	4.83E-32	68.1680
	KRT7-Hs00559840_m1	1.24E-11	11.2798	1.81E-22	59.1420
	MUC16-Hs01065189_m1	6.81E-12	29.7145	5.18E-21	198.7733
	MUC1-Hs00159357_m1	1.29E-09	5.2751	6.49E-25	32.6951
	WFDC2-Hs00899484_m1	6.90E-05	4.7808	1.51E-22	86.7282
	MSLN-Hs00245879_m1	2.80E-14	14.0035	7.12E-22	34.4299
<b>One-Carbon Metabolism and folate homeostasis</b>	FPGS-Hs00191956_m1	3.39E-01	0.9045	1.65E-13	0.3534
	GGH-Hs00914163_m1	1.38E-02	1.5443	1.24E-03	1.9281
	AASDHPPT-Hs00906486_m1	5.57E-03	0.7707	1.62E-04	0.6676
	AHCY-Hs00898135_gH	3.72E-03	1.4038	3.78E-01	0.8908
	ALDH1L2-Hs00402876_m1	5.27E-01	0.8662	1.00E+00	0.9999
	BHMT2-Hs00214120_m1	1.29E-05	0.1802	2.18E-06	0.1179
	BHMT-Hs01566156_m1	1.04E-01	0.4379	4.67E-04	0.1479
	CBS-Hs00163925_m1	3.62E-06	2.8726	3.29E-05	0.4063
	CTH-Hs00542276_m1	1.67E-01	0.7979	4.02E-13	0.2640
	DHFR-Hs00758822_s1	1.55E-04	1.4980	3.03E-03	1.3938
	MAT1A-Hs00166395_m1	2.48E-04	4.3535	1.85E-04	0.2571
	MAT2A-Hs00428515_g1	4.12E-03	1.3049	3.46E-03	0.7440
	MTHFD1-Hs00602830_m1	3.83E-04	1.3665	1.91E-06	0.6259
	MTHFD2-Hs00741165_m1	5.08E-07	2.1005	4.43E-11	3.1702
	MTHFR-Hs01114487_m1	3.44E-01	1.1301	5.17E-14	0.2893
	MTR-Hs00165188_m1	4.14E-01	0.9183	8.03E-11	0.4397
	MTRR-Hs00242867_m1	1.60E-05	0.6883	2.30E-06	0.6270
	SHMT1-Hs00244618_m1	1.75E-03	1.4768	2.85E-01	1.1496
	TYMS-Hs00426591_m1	1.02E-07	3.3592	9.24E-13	6.1374
	<b>Steroid Receptors</b>	ESR1-Hs00174860_m1	4.79E-03	0.5120	1.66E-01
AR-Hs00907244_m1		1.74E-08	0.2943	1.28E-08	0.2450
PGR-Hs01556707_m1		1.88E-12	0.0720	2.94E-10	0.0851

Table S2. Cont.

Classification	Gene	EOC vs. NAT		EOC vs. ON	
		p-Value	FC	p-Value	FC
Signal Transduction	EGFR-Hs01076078_m1	1.18E-06	0.4634	1.78E-12	0.2603
	ERBB2-Hs01001580_m1	6.36E-03	1.4768	3.58E-01	1.1517
	ERBB3-Hs00176538_m1	1.62E-07	3.6412	1.33E-16	10.9879
	ERBB4-Hs00955525_m1	1.17E-04	4.4894	2.20E-07	6.8194
	MAPK1-Hs01046830_m1	7.58E-02	0.8698	3.01E-09	0.5764
	MAPK3-Hs00385075_m1	5.64E-14	0.4502	7.43E-14	0.4253
	MAPK4-Hs00177074_m1	6.72E-08	0.1542	1.57E-13	0.0485
	MAPK6-Hs00833126_g1	1.13E-04	0.6717	1.92E-03	0.7167
	MAPK7-Hs00611114_g1	5.41E-08	0.5523	1.07E-17	0.3236
	MAPK8-Hs01548508_m1	4.68E-02	0.8381	7.92E-07	0.5993
	MAPK9-Hs00177102_m1	3.72E-02	0.8071	1.05E-03	0.6865
	MAPK10-Hs00373461_m1	4.33E-12	0.0937	4.97E-10	0.0929
	MAPK11-Hs00177101_m1	1.69E-07	0.3676	7.29E-07	0.3366
	MAPK12-Hs00268060_m1	1.23E-08	0.3534	2.44E-14	0.1914
	MAPK13-Hs00559623_m1	4.11E-08	2.5215	5.15E-12	3.0565
	MAPK14-Hs00176247_m1	8.60E-01	0.9838	5.33E-07	0.5901
	MAPK15-Hs00933429_m1	1.97E-03	3.7053	2.04E-15	50.8959
	PDGFRB-Hs01019589_m1	2.94E-10	0.1955	5.77E-16	0.0771
	PRKCA-Hs00925195_m1	5.42E-07	0.4061	1.89E-15	0.1755
	Miscellaneous Genes	ANXA2-Hs00743063_s1	1.62E-02	0.7118	1.29E-03
CPE-Hs00175676_m1		2.03E-05	0.4475	4.85E-06	0.3874
DDR1-Hs00233612_m1		1.16E-11	3.7417	1.60E-05	1.9837
DHCR24-Hs00207388_m1		5.34E-10	3.5317	4.13E-06	2.5238
DSG2-Hs00170071_m1		7.79E-12	3.0114	9.01E-03	1.3759
DST-Hs00156137_m1		3.76E-05	0.3849	5.83E-13	0.1332
GNB2L1-Hs00272002_m1		8.46E-05	0.6317	1.64E-12	0.3575
JAM3-Hs00230289_m1		1.39E-12	0.1693	1.56E-17	0.0761
KIT-Hs00174029_m1		2.16E-11	0.1095	4.79E-18	0.0279
LAPTM4B-Hs00363282_m1		5.31E-10	2.5935	1.56E-06	2.1198
MAF-Hs00193519_m1		1.21E-10	0.2251	2.01E-12	0.1603
PDZRN3-Hs00392900_m1		5.96E-11	0.1464	8.27E-18	0.0444
RCAN2-Hs00195165_m1		2.67E-14	0.1812	1.84E-18	0.1002
ST14-Hs01058386_m1		6.53E-10	4.6747	5.53E-27	44.0217
UCP2-Hs01075227_m1		1.09E-06	2.4918	6.92E-23	8.9802
ZEB2-Hs00207691_m1		5.91E-13	0.2116	6.01E-19	0.0984
ARID1A-Hs00195664_m1		8.34E-01	1.0211	6.47E-06	0.5879
ATIC-Hs00269671_m1		4.54E-04	1.3307	8.47E-02	0.8611
ERCC1-Hs01012158_m1		7.07E-06	0.6392	3.65E-10	0.4728
NR3C1-Hs00353740_m1		2.17E-08	0.4692	2.47E-09	0.4050
TP53-Hs01034249_m1		7.73E-01	0.9528	6.51E-02	0.7023
TYMP-Hs00157317_m1		1.88E-04	2.1127	7.07E-05	2.4232
LSR-Hs00210880_m1		9.68E-12	3.5118	2.39E-26	11.7775
ATP7A-Hs00921963_m1		1.02E-01	0.8265	6.94E-08	0.4888
ATP7B-Hs00163739_m1		1.54E-01	1.2272	2.41E-02	0.7026
GCLC-Hs00155249_m1		7.89E-05	0.6462	8.84E-01	1.0144
GPX1-Hs00829989_gH		8.66E-02	0.8759	2.32E-08	1.6489
GSR-Hs00167317_m1	2.40E-01	0.8860	3.46E-10	0.4680	
SLC31A1-Hs00977268_g1	3.04E-01	0.9136	4.98E-01	1.0654	
SLC31A2-Hs00156984_m1	1.25E-03	0.6432	3.59E-03	0.6353	

**Table S3.** Comparisons of Gene Expression Data for EOC vs. FN, EOC vs. ON, EOC vs. FT, FT vs. FN and FT vs. ON.

Classification	Gene	EOC vs. FN		EOC vs. ON		EOC vs. FT		FT vs. FN		FT vs. ON	
		<i>p</i> -Value	FC	<i>p</i> -Value	FC	<i>p</i> -Value	FC	<i>p</i> -Value	FC	<i>p</i> -Value	FC
<b>Folate Transporters</b>	FOLR1-Hs01124177_m1	2.19E-01	0.4579	2.15E-16	113.3125	6.04E-01	0.6766	6.37E-01	0.6768	5.61E-07	167.4686
	FOLR2-Hs01044732_g1	6.22E-01	1.1479	1.49E-02	0.6214	1.06E-01	1.6704	1.89E-01	0.6872	7.91E-05	0.3720
	FOLR3-Hs01549264_m1	2.23E-02	4.5434	8.02E-07	12.9628	8.79E-01	1.1137	5.71E-02	4.0794	3.15E-03	11.6391
	FOLR4-Hs00893205_m1	9.18E-01	0.8814	2.05E-04	0.0411	4.84E-01	0.3910	5.87E-01	2.2542	3.36E-02	0.1051
	SLC19A1-Hs00953344_m1	5.14E-06	2.4064	1.80E-01	0.8491	8.67E-02	1.4043	4.30E-02	1.7136	5.08E-03	0.6046
	SLC46A1-Hs00611081_m1	1.21E-06	0.3627	9.15E-05	0.5821	4.67E-04	2.2327	8.38E-07	0.1624	1.69E-08	0.2607
<b>Known EOC Markers</b>	EPCAM-Hs00158980_m1	8.63E-02	1.6764	4.83E-32	68.1680	4.64E-01	0.7861	8.51E-03	2.1324	1.22E-12	86.7113
	CALD1-Hs00921982_m1	3.00E-07	0.2388	8.12E-20	0.1378	3.33E-01	0.7553	1.09E-03	0.3162	2.62E-11	0.1825
	CLDN3-Hs00265816_s1	4.29E-01	1.3699	2.17E-28	103.9800	1.82E-01	1.8277	4.95E-01	0.7495	8.49E-11	56.8909
	CLDN7-Hs00600772_m1	4.83E-01	0.8098	1.57E-26	68.5804	3.29E-01	1.3841	5.68E-02	0.5851	3.53E-07	49.5500
	CP-Hs00236810_m1	1.63E-02	4.6234	4.80E-16	157.7167	5.63E-01	0.6576	1.11E-02	7.0305	4.73E-06	239.8285
	KRT7-Hs00559840_m1	1.66E-02	2.6181	1.81E-22	59.1420	7.00E-01	1.1918	9.63E-02	2.1969	1.73E-07	49.6259
	MUC16-Hs01065189_m1	1.48E-05	10.3402	5.18E-21	198.7733	2.90E-02	3.7759	1.01E-01	2.7384	8.15E-05	52.6420
	MUC1-Hs00159357_m1	6.05E-03	2.5524	6.49E-25	32.6951	5.52E-04	3.8533	2.46E-01	0.6624	1.80E-06	8.4850
	PAX8-Hs00247586_m1	8.91E-01	0.9140	2.78E-13	113.4982	5.36E-01	1.5759	2.03E-01	0.5800	2.76E-04	72.0223
	SLC34A2-Hs00197519_m1	3.14E-01	0.5304	2.79E-16	179.0069	8.45E-01	1.1499	8.25E-02	0.4613	8.89E-06	155.6780
	TMPRSS3-Hs00225161_m1	5.56E-01	0.7762	2.12E-19	91.2426	9.81E-01	0.9886	4.01E-01	0.7852	4.87E-06	92.2954
	WFDC2-Hs00899484_m1	4.51E-01	0.7046	1.51E-22	86.7282	5.46E-01	1.3654	7.63E-02	0.5160	9.10E-10	63.5179
	MSLN-Hs00245879_m1	5.09E-01	1.2877	7.12E-22	34.4299	2.25E-01	1.7278	5.62E-01	0.7453	2.63E-07	19.9272

Table S3. Cont.

Classification	Gene	EOC vs. FN		EOC vs. ON		EOC vs. FT		FT vs. FN		FT vs. ON	
		p-Value	FC	p-Value	FC	p-Value	FC	p-Value	FC	p-Value	FC
	GGH-Hs00914163_m1	6.78E-05	3.3449	1.24E-03	1.9281	1.77E-02	0.4483	6.16E-06	7.4613	8.87E-07	4.3009
	FPGS-Hs00191956_m1	3.27E-01	1.1757	1.65E-13	0.3534	1.76E-05	2.3949	2.92E-03	0.4909	9.09E-11	0.1476
	AASDHPPT-Hs00906486_m1	1.05E-03	0.6023	1.62E-04	0.6676	4.81E-01	0.8842	3.70E-02	0.6811	3.75E-02	0.7550
	AHCY-Hs00898135_gH	5.01E-01	0.8799	3.78E-01	0.8908	8.07E-01	0.9488	7.61E-01	0.9274	7.33E-01	0.9389
	ALDH1L2-Hs00402876_m1	8.49E-01	1.0737	1.00E+00	0.9999	5.53E-01	1.2898	6.07E-01	0.8325	3.76E-01	0.7752
	BHMT2-Hs00214120_m1	2.98E-03	0.1467	2.18E-06	0.1179	1.73E-02	5.5366	2.51E-10	0.0265	1.83E-18	0.0213
	BHMT-Hs01566156_m1	1.52E-02	0.1522	4.67E-04	0.1479	5.90E-01	1.5814	9.32E-07	0.0962	6.13E-06	0.0936
	CBS-Hs00163925_m1	7.78E-03	2.2364	3.29E-05	0.4063	1.20E-01	1.7309	5.10E-01	1.2920	4.40E-05	0.2348
<b>One-Carbon</b>	CTH-Hs00542276_m1	8.17E-06	0.3372	4.02E-13	0.2640	5.76E-02	1.6601	1.26E-05	0.2031	3.67E-10	0.1590
<b>Metabolism and</b>	DHFR-Hs00758822_s1	3.93E-03	1.6371	3.03E-03	1.3938	1.38E-02	0.6318	3.54E-04	2.5913	3.20E-07	2.2062
<b>folate homeostasis</b>	MAT1A-Hs00166395_m1	3.19E-03	0.2285	1.85E-04	0.2571	7.15E-01	1.2184	6.43E-06	0.1875	5.41E-04	0.2110
	MAT2A-Hs00428515_g1	1.05E-05	0.5050	3.46E-03	0.7440	7.42E-01	0.9479	1.31E-04	0.5327	1.46E-02	0.7849
	MTHFD1-Hs00602830_m1	6.35E-02	0.7835	1.91E-06	0.6259	6.78E-02	0.7562	8.47E-01	1.0360	2.07E-01	0.8276
	MTHFD2-Hs00741165_m1	4.50E-02	1.5613	4.43E-11	3.1702	1.39E-01	0.6870	9.08E-04	2.2728	6.09E-09	4.6149
	MTHFR-Hs01114487_m1	4.27E-02	0.6644	5.17E-14	0.2893	1.29E-03	2.1361	4.48E-06	0.3110	4.32E-13	0.1354
	MTR-Hs00165188_m1	1.38E-05	0.4711	8.03E-11	0.4397	1.85E-01	1.2844	6.80E-05	0.3668	2.51E-08	0.3423
	MTRR-Hs00242867_m1	2.02E-06	0.5106	2.30E-06	0.6270	7.73E-01	1.0433	1.97E-06	0.4894	4.84E-05	0.6010
	SHMT1-Hs00244618_m1	4.80E-01	0.8741	2.85E-01	1.1496	5.32E-02	1.5059	2.66E-02	0.5805	1.09E-01	0.7634
	TYMS-Hs00426591_m1	1.19E-06	5.1729	9.24E-13	6.1374	8.05E-01	0.9166	1.31E-05	5.6437	3.62E-08	6.6960



Table S3. Cont.

Classification	Gene	EOC vs. FN		EOC vs. ON		EOC vs. FT		FT vs. FN		FT vs. ON	
		p-Value	FC	p-Value	FC	p-Value	FC	p-Value	FC	p-Value	FC
Signal Transduction	EGFR-Hs01076078_m1	3.19E-02	0.5903	1.78E-12	0.2603	1.56E-02	2.0296	4.73E-04	0.2908	4.76E-11	0.1283
	ERBB2-Hs01001580_m1	1.51E-01	0.7219	3.58E-01	1.1517	2.71E-01	1.3223	3.25E-04	0.5460	2.25E-01	0.8710
	ERBB3-Hs00176538_m1	3.27E-01	0.7206	1.33E-16	10.9879	6.06E-01	0.8243	6.16E-01	0.8742	3.30E-10	13.3308
	ERBB4-Hs00955525_m1	2.66E-04	0.1541	2.20E-07	6.8194	3.96E-01	1.6272	1.49E-03	0.0947	6.65E-03	4.1908
	MAPK1-Hs01046830_m1	3.14E-04	0.6288	3.01E-09	0.5764	9.40E-01	1.0108	1.28E-03	0.6220	5.75E-07	0.5702
	MAPK3-Hs00385075_m1	6.31E-10	0.3656	7.43E-14	0.4253	9.62E-01	0.9926	4.55E-06	0.3683	5.53E-09	0.4284
	MAPK4-Hs00177074_m1	7.51E-05	0.1221	1.57E-13	0.0485	6.56E-01	0.7725	2.83E-03	0.1581	3.46E-07	0.0628
	MAPK6-Hs00833126_g1	4.94E-05	0.5130	1.92E-03	0.7167	6.84E-03	0.6174	2.26E-01	0.8309	1.25E-01	1.1608
	MAPK7-Hs00611114_g1	3.60E-02	0.7201	1.07E-17	0.3236	2.70E-03	1.7364	4.38E-04	0.4147	1.87E-12	0.1864
	MAPK8-Hs01548508_m1	2.87E-01	0.8618	7.92E-07	0.5993	7.94E-01	1.0427	2.90E-01	0.8265	3.00E-04	0.5748
	MAPK9-Hs00177102_m1	1.15E-02	0.6547	1.05E-03	0.6865	6.04E-01	0.9042	1.22E-01	0.7240	5.42E-02	0.7593
	MAPK10-Hs00373461_m1	5.35E-05	0.1160	4.97E-10	0.0929	7.27E-01	1.2260	6.11E-05	0.0946	2.57E-09	0.0758
	MAPK11-Hs00177101_m1	4.75E-05	0.2826	7.29E-07	0.3366	3.69E-01	0.7389	2.61E-04	0.3825	7.34E-04	0.4556
	MAPK12-Hs00268060_m1	6.05E-04	0.3832	2.44E-14	0.1914	5.30E-02	1.9212	1.64E-03	0.1995	9.35E-09	0.0996
	MAPK13-Hs00559623_m1	5.24E-02	0.6677	5.15E-12	3.0565	1.36E-01	0.6904	9.21E-01	0.9671	4.77E-07	4.4272
	MAPK14-Hs00176247_m1	8.70E-02	0.7763	5.33E-07	0.5901	9.14E-01	0.9824	1.55E-01	0.7903	1.39E-05	0.6007
	MAPK15-Hs00933429_m1	1.36E-05	0.1234	2.04E-15	50.8959	5.19E-01	1.3905	7.68E-05	0.0887	2.92E-04	36.6029
	PDGFRB-Hs01019589_m1	6.57E-05	0.1962	5.77E-16	0.0771	5.84E-01	1.2793	2.48E-04	0.1534	1.43E-11	0.0603
	PRKCA-Hs00925195_m1	1.82E-02	0.5258	1.89E-15	0.1755	1.76E-01	1.5146	8.01E-04	0.3471	1.41E-12	0.1159
Steroid Receptors	ESR1-Hs00174860_m1	2.43E-05	0.2162	1.66E-01	1.3861	5.96E-01	1.2469	2.10E-03	0.1734	7.59E-01	1.1116
	AR-Hs00907244_m1	3.89E-09	0.1117	1.28E-08	0.2450	1.31E-02	2.8602	3.04E-05	0.0391	6.52E-07	0.0857
	PGR-Hs01556707_m1	2.12E-11	0.0182	2.94E-10	0.0851	1.80E-01	2.3001	8.05E-06	0.0079	5.84E-07	0.0370

Table S3. Cont.

Classification	Gene	EOC vs. FN		EOC vs. ON		EOC vs. FT		FT vs. FN		FT vs. ON	
		p-Value	FC	p-Value	FC	p-Value	FC	p-Value	FC	p-Value	FC
	ANXA2-Hs00743063_s1	1.90E-01	1.3175	1.29E-03	1.6144	3.10E-01	1.2799	8.89E-01	1.0294	1.72E-01	1.2614
	CPE-Hs00175676_m1	6.92E-03	0.4598	4.85E-06	0.3874	6.33E-01	1.1642	9.17E-03	0.3950	1.64E-04	0.3328
	DDR1-Hs00233612_m1	1.02E-03	0.4650	1.60E-05	1.9837	4.38E-01	0.8247	2.95E-02	0.5639	2.92E-06	2.4054
	DHCR24-Hs00207388_m1	5.48E-02	0.6126	4.13E-06	2.5238	2.04E-01	0.6897	7.18E-01	0.8882	4.53E-04	3.6594
	DSG2-Hs00170071_m1	3.07E-01	1.2040	9.01E-03	1.3759	1.52E-01	1.3492	6.83E-01	0.8924	9.08E-01	1.0198
	DST-Hs00156137_m1	1.38E-02	0.4026	5.83E-13	0.1332	1.97E-01	1.6958	9.15E-04	0.2374	1.40E-13	0.0786
	GNB2L1-Hs00272002_m1	6.21E-02	0.7128	1.64E-12	0.3575	4.21E-01	1.1866	5.36E-02	0.6007	8.38E-07	0.3013
	JAM3-Hs00230289_m1	7.55E-05	0.2204	1.56E-17	0.0761	6.59E-02	2.1906	2.18E-05	0.1006	4.22E-14	0.0347
	KIT-Hs00174029_m1	7.08E-04	0.1875	4.79E-18	0.0279	5.67E-01	0.7206	4.48E-02	0.2602	1.27E-07	0.0388
	LAPTM4B-Hs00363282_m1	4.01E-02	1.5588	1.56E-06	2.1198	6.20E-03	0.4968	2.10E-04	3.1376	7.89E-09	4.2669
	LSR-Hs00210880_m1	3.00E-01	1.2794	2.39E-26	11.7775	3.96E-01	1.2464	8.96E-01	1.0265	4.96E-14	9.4494
	MAF-Hs00193519_m1	2.91E-01	0.7031	2.01E-12	0.1603	1.39E-03	3.5185	1.88E-05	0.1998	7.36E-16	0.0455
	RCAN2-Hs00195165_m1	1.97E-05	0.2496	1.84E-18	0.1002	8.53E-02	1.8387	2.40E-05	0.1357	9.39E-13	0.0545
	ST14-Hs01058386_m1	3.13E-01	1.2906	5.53E-27	44.0217	3.07E-01	1.3330	8.86E-01	0.9682	5.47E-07	33.0257
Miscellaneous	UCP2-Hs01075227_m1	6.08E-04	0.4455	6.92E-23	8.9802	2.33E-02	0.5565	4.53E-01	0.8006	3.43E-11	16.1383
Genes	ZEB2-Hs00207691_m1	1.82E-06	0.2057	6.01E-19	0.0984	6.64E-01	1.1638	1.74E-05	0.1768	1.95E-14	0.0846
	ARID1A-Hs00195664_m1	7.71E-04	0.5676	6.47E-06	0.5879	1.15E-01	1.3610	1.19E-03	0.4170	1.24E-05	0.4320
	ATIC-Hs00269671_m1	8.14E-01	1.0300	8.47E-02	0.8611	4.41E-01	1.1185	6.27E-01	0.9208	3.86E-02	0.7699
	ERCC1-Hs01012158_m1	1.13E-01	0.7796	3.65E-10	0.4728	2.81E-02	1.5258	6.90E-03	0.5110	2.22E-08	0.3098
	NR3C1-Hs00353740_m1	5.41E-06	0.3753	2.47E-09	0.4050	8.07E-01	1.0571	2.36E-05	0.3550	4.17E-08	0.3832
	TP53-Hs01034249_m1	4.67E-02	0.5661	6.51E-02	0.7023	2.24E-01	1.4974	6.04E-03	0.3780	7.74E-04	0.4690
	TYMP-Hs00157317_m1	7.33E-01	0.9089	7.07E-05	2.4232	3.43E-01	1.3546	1.23E-01	0.6710	9.38E-02	1.7889
	PDZRN3-Hs00392900_m1	1.70E-03	0.2481	8.27E-18	0.0444	3.47E-01	1.5891	6.57E-04	0.1561	7.15E-13	0.0279
	ATP7A-Hs00921963_m1	9.78E-07	0.3849	6.94E-08	0.4888	6.62E-01	0.9145	8.25E-05	0.4209	1.18E-05	0.5345
	ATP7B-Hs00163739_m1	1.45E-03	0.4723	2.41E-02	0.7026	8.90E-01	1.0408	6.80E-02	0.4538	1.58E-01	0.6751
	GCLC-Hs00155249_m1	1.26E-15	0.1616	8.84E-01	1.0144	4.06E-01	1.1489	2.14E-04	0.1407	4.47E-01	0.8829
	GPX1-Hs00829989_gH	1.00E-35	18.5022	2.32E-08	1.6489	7.64E-29	11.2603	1.48E-03	1.6431	2.57E-16	0.1464
	GSR-Hs00167317_m1	5.67E-05	0.5119	3.46E-10	0.4680	2.32E-01	0.8082	2.97E-03	0.6334	1.22E-05	0.5790
	SLC31A1-Hs00977268_g1	1.85E-04	0.5784	4.98E-01	1.0654	3.48E-04	0.5487	7.52E-01	1.0541	4.78E-07	1.9418
	SLC31A2-Hs00156984_m1	6.62E-03	0.5456	3.59E-03	0.6353	5.20E-01	0.8504	3.80E-02	0.6415	1.11E-01	0.7471