Supplementary Table. Primary sequence mutations in p53 exons 5-8.

Histological Type	Grade	Stage	p53 Mutation in Primary Ovarian Cancer			p53 Mutation in Extra-pelvic Implants			Amino Acid Change
			Primary Site	Exon	Codon	Extra-pelvic Site	Exon	Codon	
Serous adenocarcinoma	High	3C	Rt Ovary	WT	WT	Omentum	WT	WT	WT
Serous adenocarcinoma	High	4	Rt Ovary	6	220, TAT to TGT	Omentum	6	220, TAT to TGT	Tyr to Cys
				7	225, GTT to GTG		7	225, GTT to GTG	Val to Val
Serous adenocarcinoma	High	3C	Lt Ovary	WT	WT	Omentum	WT	WT	WT
Serous adenocarcinoma	High	3C	Rt Ovary	8	294, GAG to TAG	Soft tissue, Pelvis	8	294, GAG to TAG	Glu to STOP
Serous	High	3C	Lt Ovary	WT	WT	Omentum	WT	WT	WT

adenocarcinoma									
Adenocarcinoma w/papillary features	High	4	Lt Ovary	WT	WT	Omentum	WT	WT	WT
Adenocarcinoma w/papillary features	High	3C	Lt Ovary	7	248, CGG to CAG	Omentum	7	248, CGG to CAG	Arg to Gln
Serous adenocarcinoma	High	3C	Rt Ovary	7	248, CGG to CAG	Omentum	7	248, CGG to CAG	Arg to Gln
Serous adenocarcinoma	High	4	Rt Ovary	WT	WT	Colon	WT	WT	WT
Adenocarcinoma	High	3C	Rt Ovary	WT	WT	Omentum	WT	WT	WT
Adenocarcinoma w/papillary features	Not given	3C	Lt Ovary	WT	WT	Omentum	WT	WT	WT
Serous adenocarcinoma	High	3C	Lt Ovary	WT	WT	Omentum	WT	WT	WT
Adenocarcinoma w/papillary features	High	2B	Rt Ovary	6	220, TAT to TGT	Cul-de-sac	6	220, TAT to TGT	Tyr to Cys

Clear cell carcinoma	High	3C	Lt Ovary	WT	WT	Omentum	WT	WT	WT
Adenocarcinoma w/papillary features	High	3C	Lt Ovary	7	245, GGC to GAC	Omentum	7	245, GGC to GAC	Gly to Asp
Adenocarcinoma w/papillary features	High	3C	Rt Ovary	7	248, CGG to CAG	Omentum	7	248, CGG to CAG	Arg to Gln
Adenocarcinoma	High	3C	Lt Ovary	WT	WT	Colon	WT	WT	WT
Serous adenocarcinoma	High	3C	Rt Ovary	WT	WT	Omentum	WT	WT	WT
Serous adenocarcinoma	High	3C	Rt Ovary	WT	WT	Omentum	WT	WT	WT
Serous adenocarcinoma	High	4	Rt Ovary	WT	WT	Omentum	WT	WT	WT
Adenocarcinoma	High	2C	Rt Ovary	WT	WT	Omentum	WT	WT	WT
Adenocarcinoma	High	3C	Rt Ovary	WT	WT	Omentum	WT	WT	WT
Adenocarcinoma	High	4	Rt Ovary	WT	WT	Omentum	WT	WT	WT

w/papillary features									
Serous adenocarcinoma	High	3C	Rt Ovary	7	234, TAC to TGC	Omentum	7	234, TAC to TGC	Tyr to Cys
Serous adenocarcinoma	High	3C	Rt, Lt Ovary	WT	WT	Omentum	WT	WT	WT
Adenocarcinoma	High	3C	Rt Ovary	5	151, CCC to ^CC	Omentum	5	151, CCC to ^CC	Pro to Frame shift
Adenocarcinoma	High	3B	Rt, Lt Ovary	WT	WT	Omentum	WT	WT	WT
Serous adenocarcinoma	Moder ate	3C	Rt Ovary	WT	WT	Soft tissue (periaortic)	WT	WT	WT
Serous adenocarcinoma	High	3C	Rt, Lt Ovary	8	282, CGG to TGG	Omentum	8	282, CGG to TGG	Asp to Trp
Clear cell carcinoma	High	3C	Lt Ovary	6	213, CGA to CGG	Omentum	6	213, CGA to CGG	Arg to Arg
				7	245, GGC to GAC		7	245, GGC to GAC	Gly to Asp

Abbreviations: Lt, left; Rt, right; WT, wild-type.

Pairwise analysis	Appendix 1. Number of Probesets with >2-fold change in expression		
Sample	Normal Ovary versus pelvic	Normal ovary vs extra-pelvic implant	pelvic primary vs extra-pelvic implant
1	6339	8137	2413
2	6562	7483	2813
3	6873	6608	3464
4	7049	7069	1032
5	8012	6834	1710
6	8052	7304	2446
7	8364	7951	335
8	6645	6886	6220
9	7229	7343	86
10	8469	7497	2048
11	8069	7980	2151
12	8321	8192	596
13	7944	7867	683
14	8080	8836	1135
15	7157	8225	1120
16	7249	7105	874
17	7171	7682	600
18	7424	7907	660
19	7754	8244	545
20	8342	8130	980
21	6790	8024	138
22	7341	7620	2020
23	6876	8007	925
24	6728	8127	3449
25	8144	7833	600
26	7717	7888	545
27	7539	6968	1630
28	6965	7629	620
29	6793	9087	850
30	5749	8706	1213
31	6304	6878	4084
MEAN	7356	7743	1548

Grouped analysis: Pathways unique to grouped NOSE versus grouped Extra-pelvic implants

	pathway name	FDR<0.05?	p-value
1	Immune response_Immunological synapse formation	yes	9.08E-05
2	Apoptosis and survival_Role of IAP-proteins in apoptosis	yes	3.69E-04
3	Oxidative stress_Angiotensin II-induced production of ROS	yes	7.31E-04
4	Development_Mu-type opioid receptor signaling via Beta-arrestin	yes	8.11E-04
5	Development_Activation of ERK by Kappa-type opioid receptor	yes	8.54E-04
6	Immune response_Histamine signaling in dendritic cells	yes	9.43E-04
7	Glutathione metabolism / Rodent version	no	3.01E-02
8	Signal transduction_JNK pathway	yes	1.96E-03
9	Immune response_Delta-type opioid receptor signaling in T-cells	yes	1.99E-03
10	Immune response_NF-AT signaling and leukocyte interactions	no	3.15E-03
11	Immune response_IL-15 signaling	no	4.02E-03
12	Chemotaxis_Inhibitory action of lipoxins on IL-8- and Leukotriene B4-induced neutrophil migration	no	5.31E-03
13	Immune response_PGE2 common pathways	no	5.84E-03
14	Immune response_IFN alpha/beta signaling pathway	no	6.44E-03
15	Apoptosis and survival_Apoptotic Activin A signaling	no	7.47E-03
16	Cytoskeleton remodeling_TGF, WNT and cytoskeletal remodeling	no	8.71E-03
17	Inhibitory action of Lipoxins on neutrophil migration	no	9.13E-03
18	Immune response_CCR5 signaling in macrophages and T lymphocytes	no	9.92E-03
19	Immune response_Neurotensin-induced activation of IL-8 in colonocytes	no	1.02E-02
20	Neurophysiological process_HTR1A receptor signaling in neuronal cells	no	1.02E-02
21	Regulation of lipid metabolism_G-alpha(q) regulation of lipid metabolism	no	1.08E-02
22	Apoptosis and survival_FAS signaling cascades	no	1.12E-02
23	Development_Angiotensin signaling via PYK2	no	1.12E-02
24	G-protein signaling_RhoB regulation pathway	no	1.31E-02
25	Development_Ligand-independent activation of ESR1 and ESR2	no	1.36E-02
26	Immune response_PGE2 signaling in immune response	no	1.36E-02
27	Development_Gastrin in cell growth and proliferation	no	1.36E-02
28	Cell adhesion_Chemokines and adhesion	no	1.41E-02
29	Development_G-CSF-induced myeloid differentiation	no	1.43E-02
30	Development_G-Proteins mediated regulation MAPK-ERK signaling	no	1.48E-02
31	Transcription_Transcription factor Tubby signaling pathways	no	1.56E-02
32	Development_Beta-adrenergic receptors regulation of ERK	no	1.62E-02
33	Immune response_Fc gamma R-mediated phagocytosis in macrophages	no	1.62E-02
34	Cell adhesion_Integrin-mediated cell adhesion and migration	no	1.76E-02
35	Signal transduction_ERK1/2 signaling pathway	no	1.79E-02
36	Development_A3 receptor signaling	no	1.91E-02
37	Development_G-CSF signaling	no	1.91E-02
38	Development_Angiotensin activation of ERK	no	1.98E-02

39	Apoptosis and survival_Caspase cascade	no	1.98E-02
40	Cell adhesion_IL-8-dependent cell migration and adhesion	no	1.98E-02
41	Neurophysiological process_Corticoliberin signaling via CRHR1	no	2.07E-02
42	Protein folding_Membrane trafficking and signal transduction of G-alpha (i) heterotrimeric G-protein	no	2.11E-02
43	G-protein signaling_G-Protein beta/gamma signaling cascades	no	2.19E-02
44	Immune response_Role of the Membrane attack complex in cell survival	no	2.19E-02
45	G-protein signaling_G-Protein alpha-q signaling cascades	no	2.19E-02
46	Signal transduction_Activation of PKC via G-Protein coupled receptor	no	2.41E-02
47	Development_FGF-family signaling	no	2.41E-02
48	G-protein signaling_Proinsulin C-peptide signaling	no	2.41E-02
49	Immune response_Antiviral actions of Interferons	no	2.41E-02
50	Development_EPO-induced Jak-STAT pathway	no	2.42E-02
51	Immune response_Inflammasome in inflammatory response	no	2.42E-02
52	Immune response_Oncostatin M signaling via MAPK in mouse cells	no	2.42E-02
53	G-protein signaling_S1P2 receptor signaling	no	2.42E-02
54	Cell cycle_Influence of Ras and Rho proteins on G1/S Transition	no	2.60E-02
55	Immune response_IL-9 signaling pathway	no	2.65E-02
56	G-protein signaling_Rac2 regulation pathway	no	2.65E-02
57	Immune response_TLR signaling pathways	no	2.79E-02
58	Immune response_Oncostatin M signaling via MAPK in human cells	no	2.90E-02
59	Development_S1P4 receptor signaling pathway	no	3.13E-02
60	Immune response_MIF-mediated glucocorticoid regulation	no	3.13E-02
61	Immune response_Role of integrins in NK cells cytotoxicity	no	3.16E-02
62	Immune response_Human NKG2D signaling	no	3.16E-02
63	Cell adhesion_Integrin inside-out signaling	no	3.20E-02
64	G-protein signaling_Regulation of p38 and JNK signaling mediated by G-proteins	no	3.44E-02
65	Apoptosis and survival_Ceramides signaling pathway	no	3.73E-02
66	Immune response_Th1 and Th2 cell differentiation	no	3.73E-02
67	Development_Dopamine D2 receptor transactivation of EGFR	no	3.93E-02
68	Development_VEGF-family signaling	no	4.04E-02
69	Neurophysiological process_NMDA-dependent postsynaptic long-term potentiation in CA1 hippocampal neurons	no	4.15E-02
70	Serotonin modulation of dopamine release in nicotine addiction	no	4.35E-02
71	Apoptosis and survival_Lymphotoxin-beta receptor signaling	no	4.35E-02
72	Immune response_Murine NKG2D signaling	no	4.35E-02
73	Development_Angiotensin signaling via beta-Arrestin	no	4.37E-02
74	Development_Alpha-2 adrenergic receptor activation of ERK	no	4.67E-02
75	Development_ACM2 and ACM4 activation of ERK	no	4.68E-02
76	Signal transduction_AKT signaling	no	4.68E-02
77	Immune response_IL-7 signaling in B lymphocytes	no	4.68E-02
78	Development_S1P3 receptor signaling pathway	no	4.68E-02

79	Signal transduction_AKT signaling	no	4.68E-02
80	Immune response_HTR2A-induced activation of cPLA2	no	4.68E-02
81	G-protein signaling_Ras family GTPases in kinase cascades (scheme)	no	4.83E-02

Individual primary pelvic (n=30) versus extra-pelvic implant (n=30). Pathways common to ≥15 paired samples.

Appendix 3	Pathway name	common to # pairs
1	Cell adhesion_ECM remodeling	27
2	CXC Chemokine-receptor family	25
3	Cell adhesion_Cell-matrix glycoconjugates	23
4	Cell adhesion_Chemokines and adhesion	23
5	Development_Regulation of epithelial-to-mesenchymal transition (EMT)	23
6	Development_Hedgehog and PTH signaling pathways in bone and cartilage development	20
7	Role of Diethylhexyl Phthalate and Tributyltin in fat cell differentiation	20
8	Development_Beta-adrenergic receptors signaling via cAMP	18
9	Immune response_IL-17 signaling pathways	18
10	Protein folding_Membrane trafficking and signal transduction of G-alpha (i) heterotrimeric G-protein	18
11	Cardiac Hypertrophy_NF-AT signaling in Cardiac Hypertrophy	17
12	Cell adhesion_Plasmin signaling	17
13	Development_TGF-beta-dependent induction of EMT via SMADs	17
14	Development_WNT signaling pathway. Part 2	17
15	Immune response_Histamine H1 receptor signaling in immune response	17
16	Cytoskeleton remodeling_TGF, WNT and cytoskeletal remodeling	16
17	Development_Role of Activin A in cell differentiation and proliferation	16
18	Development_TGF-beta-dependent induction of EMT via MAPK	16
19	Immune response_HMGB1/RAGE signaling pathway	16
20	PGE2 pathways in cancer	16
21	Chemotaxis_Leukocyte chemotaxis	15
22	Immune response_Histamine signaling in dendritic cells	15
23	Immune response_MIF-mediated glucocorticoid regulation	15
24	Immune response_TLR signaling pathways	15