Table S1. Patient demographics for neutrophil isolation and quantification, related to Figure 1

Category	Patient Number	Diagnosis	Omentum Diagnosis from Pathology Report	% Neutrophils in tissue
Benign	1630	Benign: incompetent cervix		6.07%
	1633	Benign: incompetent cervix		9.01%
	1637	Benign: incompetent cervix		6.02%
	1643	Benign: incompetent cervix		2.77%
	1678	Benign: incompetent cervix		10.70%
	1684	Benign: incompetent cervix		18.10%
	1699	Benign: incompetent cervix		5.32%
	1701	Benign: incompetent cervix		17%
	1693	Benign: incompetent cervix		19.90%
	1725	Benign: incompetent cervix		14.10%
	1540	Benign: incompetent cervix		14.40%
	1555	Benign: ovarian cyst		19.40%
	1709	Benign: incompetent cervix		20.10%
	1744	Benign: incompetent cervix		13.10%
	1753	Benign: incompetent cervix		6.26%
	1784	Benign: incompetent cervix		5.05%
	1826	Benign: incompetent cervix		6.03%
	1828	Benign: incompetent cervix		1.04%
	1899	Benign: incompetent cervix		16.70%
	1887	Benign: incompetent cervix		7.17%
	1923	Benign: incompetent cervix		16.90%
	1941	Benign: incompetent cervix		9.59%
	1800	Benign: incompetent cervix		28.30%
	1818	Benign: simple serous cyst		6.93%
Pre-Mets	1691	Cancer: stage IA Intestinal-type (colonic-type) adenocarcinoma within a mature cystic teratoma	Omental adipose tissue with reactive changes including focal mesothelial hyperplasia, no tumor	67.40%
	1664	Cancer: stage IB serous borderline tumor of the ovary	Fibroadipose tissue negative for tumor	39.60%
	1559	Cancer: Recurrent mucinous carcinoma of the ovary	Fibroadipose and lymphoid tissue with no metastasis. - three lymph nodes, without diagnostic abnormality (0/3)	63.80%
	1663	Cancer: stage IC2 clear cell carcinoma of the left ovary	Fibroadipose tissue negative for tumor	52.90%

	1730	Low grade well-differentiated type paraganglioma Serous cystadenofibroma of right ovary Focal complex hyperplasia with atypia of endometrium	Fibrovascular tissue without diagnostic abnormality	62.70%
Tumors	1536	Cancer: Stage IIIC high grade papillary serous carcinoma of left ovary	Metastatic serous carcinoma	23.10%
	1700	Cancer: stage IIIC high grade serous carcinoma of the fallopian tube	High grade serous carcinoma involving fibroadipose tissue	34.10%

Patient demographics for human neutrophil sources, including omental adipose tissue neutrophils (ONs) from non-cancer patients (n=24), tumor-associated neutrophils (TANs) from ovarian cancer patients with metastatic tumors (n=2), and ONs from omental adipose tissue (primary metastatic site) of pre-metastatic ovarian cancer patients (n=5).

Table S3. Shotgun proteomics analysis of serine protease inhibitors in murine PN and human PMN media, related to Figure 3

	Human PMN media			
Protein annotation	**Protein quantification (spectral counts)**		**% share of spectrum ID**	
Protein	**Donor 1**	**Donor 2**	**Donor 1**	**Donor 2**
sp|P01009|A1AT_HUMAN	3	7	0.014%	0.032%
sp|P30740|ILEU_HUMAN	37	50	0.177%	0.228%
sp|P30086|PEBP1_HUMAN	32	29	0.153%	0.132%
sp|P01023|A2MG_HUMAN	3	6	0.014%	0.027%
sp|P03973|SLPI_HUMAN	**0**	**0**	**0.000%**	**0.000%**
Total Counts	20923	21939		

	Mouse PN media			
Protein annotation	**Protein quantification (spectral counts)**		**% share of spectrum ID**	
Protein	**Mouse 1**	**Mouse 2**	**Mouse 1**	**Mouse 2**
sp|P07758|A1AT1_MOUSE	3	8	0.012%	0.035%
sp|Q9D154|ILEUA_MOUSE	75	82	0.300%	0.360%
sp|P70296|PEBP1_MOUSE	1	9	0.004%	0.040%
sp|Q61838|A2M_MOUSE	16	19	0.064%	0.083%
sp|P97430|SLPI_MOUSE	**16**	**9**	**0.064%**	**0.040%**
Total Counts	24979	22774		

Human PMNs were purified from healthy donors (n=2). Mouse PNs were isolated 7h post thioglycolate-injection (n=2). Serine protease inhibitors were quantified by spectral counting and normalized to the number of total peptides identified per run to obtain a % share of spectrum ID.

Table S4. Shotgun proteomics analysis of FLAG-DD^{ELANE} in cancer and non-cancer cells, related to Figure 5

	Protein quantification (spectral counts: H1/CD95)				
Protein annotation	**MDA-MB-231**	**A549**	**MEL888**	**MCF10A**	**Fibroblasts**
sp|P07305|H10_HUMAN	2.0	1.0	0.9	0.4	0.2
sp|P16403|H12_HUMAN	4.0	2.0	2.0	0.6	0.5
sp|P10412|H14_HUMAN	4.0	7.0	5.4	1.6	1.4
sp|P16401|H15_HUMAN	0.0	1.0	3.7	0.9	0.7

Cancer and non-cancer cells were transduced with FLAG-DD^{ELANE}, cell lysates were collected, and immunoprecipitated with anti-FLAG antibody magnetic beads. Putative binding proteins were identified by mass spectrometry. Proteins were quantified by spectral counting and expressed relative to CD95 levels.