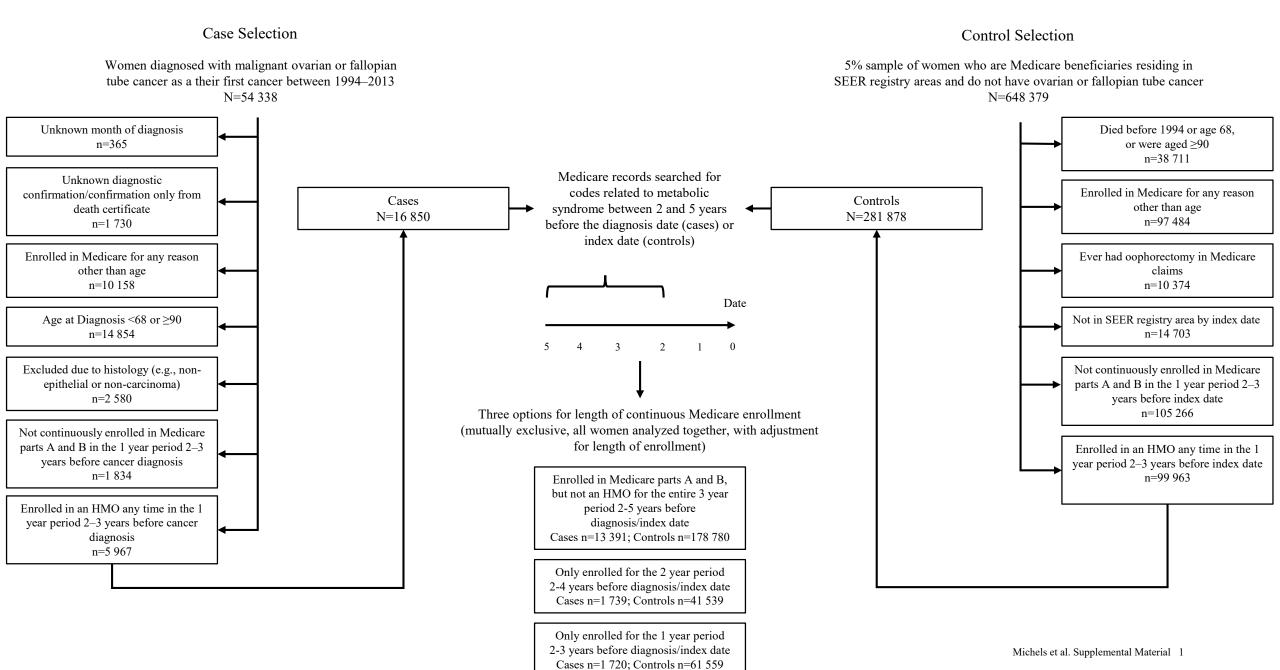
Supplemental Figure 1. Selection of cases and controls from the Surveillance, Epidemiology and End Results (SEER)-Medicare linked data



Histotype	ICD-O-3 codes				
Serous (n=7,543)	8441, 8442, 8460, 8461, 8462, 9014				
Endometrioid (n=1,114)	8380, 8381, 8382, 8383, 8560, 8570				
Clear Cell (n=386)	8310, 8313				
Mucinous (n=797)	8470, 8471, 8480, 8481, 8482, 8490, 9015				
Other Epithelial (n=7,010)	8005, 8010, 8012, 8013, 8015, 8020, 8021, 8022, 8031, 8032, 8033, 8040, 8041, 8043, 8046, 8050, 8052, 8070, 8074, 8120, 8140, 8141, 8230, 8240, 8246, 8250, 8255, 8260, 8263, 8290, 8323, 8340, 8440, 8443, 8444, 8450, 8503, 8550, 8562, 8574, 8576, 8650, 8806, 9110				

Supplemental Table 1. Morphology codes included in the histotype classifications for this analysis (cancer site: ovarian or fallopian tube)

Supplemental Table 2. Codes used to identify metabolic syndrome and its components, between 1994 and 2013 in SEER-Medicare linked data

We used the following ICD-9-CM diagnosis codes, where x indicates that any value (or blank) is allowed in that digit:

Condition	Codes
Overweight, obesity	A diagnosis of unspecified or overweight/obesity/morbid obesity or central adiposity (278, 278.0, 278.0x, 278.1, V77.8 ^a)
Impaired fasting glucose	A diagnosis of type 2 diabetes or impaired fasting glucose (250.x0, 250.x2, 790.2x) ^b
Hypertension	A diagnosis of hypertensive disease (401.xx through 405.xx)
High triglycerides	A diagnosis of pure hyperglycemia, mixed hyperlipidemia, hyperchylomicronemia, or other unspecified hyperlipidemia (272.1x through 272.4x) ^c
Low HDL cholesterol	A diagnosis of lipoprotein deficiency (272.5x)
Dysmetabolic syndrome	A diagnosis of metabolic syndrome (277.7) ^d

^aCode for central adiposity (V77.8) only available from 2001-2007 ^bCodes 250, 250.x were not included because they generically reference both type 1 and 2 diabetes, and codes 250.x1 and 250.x3 were not included because they also include type 1 diabetes

°272, 272.0, 272.0x are not included

^dStarted use in 2001. Our primary definition of metabolic syndrome required this diagnosis or a diagnosis of 3 or more metabolic syndrome components

Race/Endity Rest 238 174 8 Non-Hispanic White 14 918 88.5 238 174 8 Non-Hispanic Black 101 1.2 5 303 Asian 201 1.2 5 303 San 201 1.2 5 303 Asian 201 1.2 5 303 Cher/ unknown 290 1.7 7 369 Registry at diagnosis 3 5 3 San Francisco 688 4.1 11 433 Connecticut 1 241 7.4 18 770 Detroit 1 484 8.8 20 774 Hawaii 1 82 1.1 3 936 Jova 1 341 8.0 874 New Micico 4 27 2.5 7 782 Ulah 542 3.2 7 158 Mard Googia 63 0.4 701 Gaeact California 2.287 13.6 4217 1 Kentucky 910 5.4 <td< th=""><th></th><th>Cases</th><th></th><th colspan="3">Controls</th></td<>		Cases		Controls		
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Supplemental Table 3. Characteristics of the analytic population: patients with ovarian or fallopian tube cancer and controls identified between 1994 and 2013 in the SEER-Medicare linked data.

Central adiposity Overweight / obesity Impaired fasting glucose Hypertension High triglycerides Low HDL cholesterol	14 1 328 4 770 12 168 8 958 104	0.1 7.9 28.3 72.2 53.2 0.6	362 24 997 82 922 191 822 135 329 1 870	0.1 8.9 29.4 68.1 48.0 0.7
Cancer characteristics				
Histology				
Serous	7 543	44.8		
Endometrioid	1 114	6.6		
Mucinous	386	2.3		
Clear Cell	797	4.7		
Other Epithelial	7 010	41.6		
Grade				
Low	2 491	14.8		
High	7 369	43.7		
Missing	6 990	41.5		

n=number SD=standard deviation

^aThe primary definition of metabolic syndrome presented in our analyses was: 3 or more signs for metabolic syndrome (central adiposity or overweight/obesity, impaired fasting glucose [including type II diabetes], high blood pressure, high triglycerides, low HDL cholesterol) and/or a diagnosis of 'dysmetabolic syndrome.'

Supplemental Table 4. Associations between metabolic syndrome, its components, and ovarian or fallopian tube cancer by race/ethnicity, SEER-Medicare linked data (1994–2013)

	Non-Hispanic White			Non-Hispanic Black Hispanic				Pb	
	OR ^a	95% CI	OR ^a	95% CI	OR ^a	95% CI	OR ^a	95% CI	
Metabolic syndrome									
(≥3 vs.<3)	0.86	0.82-0.89	0.89	0.77-1.03	0.73	0.53-1.01	0.99	0.78–1.25	0.27
Number of metabolic									
syndrome components									
0		Reference		Reference		Reference		Reference	0.16
1	1.22	1.16-1.28	1.68	1.34-2.10	1.15	0.69-1.80	1.08	0.75-1.56	
2	1.21	1.15-1.28	1.57	1.26-1.95	1.10	0.70 - 1.74	1.20	0.86-1.68	
≥3	1.00	0.95-1.06	1.32	1.05-1.67	0.80	0.50-1.27	1.13	0.79–1.61	
Overweight/obesity	0.82	0.77–0.88	0.93	0.77-1.12	0.77	0.50-1.20	0.90	0.54–1.50	0.44
Impaired fasting glucose	0.89	0.85-0.92	1.01	0.89-1.16	0.87	0.64-1.17	1.07	0.86-1.33	0.06
Hypertension	1.07	1.03-1.12	1.34	1.11-1.60	0.84	0.60-1.19	1.14	0.87 - 1.48	0.12
High triglycerides	1.06	1.02 - 1.10	0.91	0.79-1.05	0.91	0.66-1.25	1.07	0.85-1.35	0.27

n=number, OR= odds ratio, CI=confidence interval

^aLogistic regression models were run separately for each exposure. Models were adjusted for diagnosis date, age, race, geographic location, state Medicare buyin, history of smoking or tobacco use, and length of Medicare enrollment. Models for women in the "other race" group are suppressed due to model instability, but these women were included when assessing effect modification (see below).

^bTo assess effect modification across race groups, we used likelihood ratio tests comparing nested models with and without an interaction term between race and each of the metabolic syndrome exposures.

			Metabolic sys	ndrome ^a			Numbe	r of metabolic	syndrome sig	ns ^b	
		No		Yes		1		2		3+	
		n	%	n	%	n	%	n	%	n	%
Cases	Central adiposity	c									
	Overweight / obesity	287	2.2	1 041	27.8	39	0.9	249	4.5	1 040	27.9
	Impaired fasting glucose	1 424	10.9	3 346	89.2	213	4.7	1 218	22.0	3 339	89.7
	Hypertension	8 444	64.5	3 724	99.3	3 204	70.9	5 260	95.2	3 704	99.5
	High triglycerides	5 351	40.9	3 607	96.2	1 057	23.4	4 313	78.1	3 588	96.3
	Low HDL cholesterol										
Controls	Central adiposity	74	<0.1	288	0.4	15	<0.1	60	0.1	287	0.4
	Overweight / obesity	4 434	2.0	20 563	31.6	691	1.0	3 763	4.8	20 543	31.8
	Impaired fasting glucose	24 508	11.3	58 414	89.8	3 942	5.4	20 667	26.2	58 313	90.4
	Hypertension	127 196	58.7	64 626	99.4	53 033	73.1	74 537	94.6	64 252	99.6
	High triglycerides	72 976	33.7	62 353	95.9	14 869	20.5	58 467	74.2	61 993	96.1
	Low HDL cholesterol	247	0.1	1 623	2.5	38	0.1	210	0.3	1 622	2.5

Supplemental Table 5. Prevalence estimates for metabolic syndrome components, by metabolic syndrome status and number of documented components

n=number

^aThe primary definition of metabolic syndrome presented in our analyses was: 3 or more metabolic syndrome components (shown above) and/or a diagnosis of 'dysmetabolic syndrome.' Women meeting this definition were compared to a referent group of those not meeting it (i.e., including those with only one or two signs). When comparing the number of metabolic syndrome signs with which women were diagnosed, those without signs are the reference group.

^bNumbers for women without any metabolic syndrome components not shown.

^cNumbers suppressed due to small cell size.