

Supplementary Material

Supplementary Table 1. Histology codes included in the study to define subgroups of endometrial cancer study based on ICD-O-3, invasive behaviors only*

Included Histology Codes	
Endometrioid	8050/3: Papillary carcinoma, NOS 8141/3: Scirrhus adenocarcinoma 8210/3: Adenocarcinoma in adenomatous polyp 8211/3: Tubular adenocarcinoma 8260/3: Papillary adenocarcinoma, NOS 8261/3: Adenocarcinoma in villous adenoma 8262/3: Villous adenocarcinoma 8263/3: Adenocarcinoma in tubulovillous adenoma 8380/3: Endometrioid carcinoma 8381/3: Endometrioid adenofibroma, malignant 8382/3: Endometrioid adenocarcinoma, secretory variant 8383/3: Endometrioid adenocarcinoma, ciliated cell variant 8440/3: Cystadenocarcinoma, NOS 8470/3: Mucinous cystadenocarcinoma, NOS 8471/3: Papillary mucinous cystadenocarcinoma 8480/3: Mucinous adenocarcinoma 8481/3: Mucin-producing adenocarcinoma 8490/3: Signet ring cell carcinoma 8560/3: Adenosquamous carcinoma 8570/3: Adenocarcinoma with squamous metaplasia 8571/3: Adenocarcinoma with cartilaginous and osseous metaplasia 8140/3: Adenocarcinoma, NOS
Nonendometrioid	8255/3: Adenocarcinoma with mixed subtypes 8310/3: Clear cell adenocarcinoma, NOS 8323/3: Mixed cell adenocarcinoma 8441/3: Serous cystadenocarcinoma, NOS 8460/3: Papillary serous cystadenocarcinoma 8461/3: Serous surface papillary carcinoma 8950/3: Mullerian mixed tumor 8951/3: Mesodermal mixed tumor 8980/3: Carcinosarcoma, NOS 8981/3: Carcinosarcoma, embryonal
Sarcomas	8800/3: Sarcoma, NOS 8801/3: Spindle cell sarcoma 8802/3: Giant cell sarcoma 8803/3: Small cell sarcoma 8804/3: Epithelioid sarcoma 8805/3: Undifferentiated sarcoma 8810/3: Fibrosarcoma, NOS 8811/3: Fibromyxosarcoma 8814/3: Infantile fibrosarcoma 8840/3: Myxosarcoma

	<p>8850/3: Liposarcoma, NOS 8853/3: Round cell liposarcoma 8855/3: Mixed liposarcoma 8860/3: Angiomyoliposarcoma 8890/3: Leiomyosarcoma, NOS 8891/3: Epithelioid leiomyosarcoma 8895/3: Myosarcoma 8896/3: Myxoid leiomyosarcoma 8900/3: Rhabdomyosarcoma, NOS 8901/3: Pleomorphic rhabdomyosarcoma, adult type 8902/3: Mixed type rhabdomyosarcoma 8910/3: Embryonal rhabdomyosarcoma, NOS 8912/3: Spindle cell rhabdomyosarcoma 8920/3: Alveolar rhabdomyosarcoma 8930/3: Endometrial stromal sarcoma, NOS 8931/3: Endometrial stromal sarcoma, low grade 8933/3: Adenosarcoma 8935/3: Stromal sarcoma, NOS 8936/3: GI stromal sarcoma 9120/3: Hemangiosarcoma 9180/3: Osteosarcoma, NOS 9220/3: Chondrosarcoma, NOS 9240/3: Mesenchymal chondrosarcoma 9260/3: Ewing sarcoma</p>
Other	<p>8000/3: Neoplasm, malignant 8001/3: Tumor cells, malignant 8004/3: Malignant tumor, spindle cell type 8005/3: Malignant tumor, clear cell type 8010/3: Carcinoma, NOS 8011/3: Epithelioma, malignant 8012/3: Large cell carcinoma, NOS 8013/3: Large cell neuroendocrine carcinoma 8014/3: Large cell carcinoma with rhabdoid phenotype 8015/3: Glassy cell carcinoma 8020/3: Carcinoma, undifferentiated, NOS 8021/3: Carcinoma, anaplastic type, NOS 8022/3: Pleiomorphic carcinoma 8030/3: Giant cell and spindle cell carcinoma 8031/3: Giant cell carcinoma 8032/3: Spindle cell carcinoma 8033/3: Pseudosarcomatous carcinoma 8040/3: Tumorlet, malignant 8041/3: Small cell carcinoma, NOS 8045/3: Combined small cell carcinoma 8046/3: Non-small cell carcinoma 8051/3: Verrucous carcinoma, NOS 8052/3: Papillary squamous cell carcinoma 8070/3: Squamous cell carcinoma, NOS</p>

<p>8071/3: Squamous cell carcinoma, keratinizing, NOS 8072/3: Squamous cell ca., large cell, nonkeratinizing 8073/3: Squamous cell ca., small cell, nonkeratinizing 8074/3: Squamous cell carcinoma, spindle cell 8076/3: Squamous cell carcinoma, microinvasive 8082/3: Lymphoepithelial carcinoma 8083/3: Basaloid squamous cell carcinoma 8084/3: Squamous cell carcinoma, clear cell type 8098/3: Adenoid basal cell carcinoma 8120/3: Transitional cell carcinoma, NOS 8130/3: Papillary transitional cell carcinoma 8144/3: Adenocarcinoma, intestinal type 8200/3: Adenoid cystic carcinoma 8201/3: Cribriform carcinoma, NOS 8220/3: Adenocarcinoma in adenomatous polyposis coli 8221/3: Adenocarcinoma in mult. adenomatous polyposis coli 8230/3: Solid carcinoma, NOS 8244/3: Composite carcinoid 8246/3: Neuroendocrine carcinoma 8249/3: Atypical carcinoid tumor 8290/3: Oxyphilic adenocarcinoma 8313/3: Clear cell adenocarcinofibroma 8320/3: Granular cell carcinoma 8370/3: Adrenal cortical carcinoma 8384/3: Adenocarcinoma, endocervical type 8410/3: Sebaceous adenocarcinoma 8450/3: Papillary cystadenocarcinoma, NOS 8482/3: Mucinous adenocarcinoma, endocervical type 8507/3: Ductal carcinoma, micropapillary 8510/3: Medullary carcinoma, NOS 8562/3: Epithelial-myoepithelial carcinoma 8574/3: Adenocarcinoma with neuroendocrine differentiation 8575/3: Metaplastic carcinoma, NOS 8576/3: Hepatoid adenocarcinoma 8580/3: Thymoma, malignant, NOS 8590/3: Sex cord-gonadal stromal tumor, malignant, NOS 8620/3: Granulosa cell tumor, malignant 8806/3: Desmoplastic small round cell tumor 8825/3: Myofibroblastoma, malignant 8830/3: Fibrous histiocytoma, malignant 8897/3: Malignant tumor of smooth muscle 8934/3: Carcinofibroma 8940/3: Mixed tumor, malignant, NOS 8960/3: Nephroblastoma, NOS 8963/3: Malignant rhabdoid tumor 8990/3: Mesenchymoma, malignant 9014/3: Serous adenocarcinofibroma 9015/3: Mucinous adenocarcinofibroma</p>
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	9065/3: Germ cell tumor, nonseminomatous 9071/3: Yolk sac tumor 9080/3: Teratoma, malignant, NOS 9085/3: Mixed germ cell tumor 9100/3: Choriocarcinoma, NOS 9101/3: Choriocarcinoma combined with other germ cell elements 9104/3: Malignant placental site trophoblastic tumor 9105/3: Trophoblastic tumor, epithelioid 9110/3: Mesonephroma, malignant 9130/3: Hemangioendothelioma, malignant 9150/3: Hemangiopericytoma, malignant 9251/3: Malignant giant cell tumor of soft parts 9364/3: Peripheral neuroectodermal tumor 9380/3: Glioma, malignant 9473/3: Primitive neuroectodermal tumor 9508/3: Atypical teratoid/rhabdoid tumor 9581/3: Alveolar soft part sarcoma
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* We utilized clinically relevant ICD-0-3 codes which have been consistently used across published literature of endometrial cancer trend studies to ensure our data are comparable.^{23,24} Histology codes 9050-9055 (mesothelioma), 9140 (Kaposi sarcoma), and 9590-9992 (Hodgkin and non-Hodgkin lymphomas, plasma cell tumors, mast cell tumors, neoplasms of histiocytes and accessory lymphoid cells, immunoproliferative diseases, leukemias, chronic myeloproliferative disorders, other hematologic disorders, myelodysplastic syndromes) are excluded, according to SEER Site Recode.¹³

Supplementary Table 2. Annual Age-Adjusted Incidence Rates (AAIRs per 100,000) by Race/Ethnicity for Early-Onset Endometrial Cancer (EOEC) and Late-Onset Endometrial (LOEC), 1995-2018, United States

EOEC (Age <50)						
	All Races	Hispanic	NH Asian/Pacific Islander	NH Black	NH White	
1995	4.1	4.2	4.4	2.3	4.2	
1996	4.1	3.8	4.5	2.2	4.4	
1997	4.1	3.5	3.9	2.3	4.4	
1998	4.2	3.7	3.8	2.2	4.6	
1999	4.2	4.0	4.2	2.2	4.5	
2000	4.5	4.4	4.6	2.3	4.8	
2001	4.6	4.5	4.7	2.8	4.8	
2002	4.6	4.4	4.8	2.9	4.8	
2003	4.5	4.2	4.7	2.4	4.8	
2004	4.7	4.6	5.3	2.8	5.0	
2005	4.7	4.8	5.0	2.6	5.0	
2006	4.9	5.0	4.5	3.0	5.3	
2007	4.9	4.8	4.9	2.8	5.1	
2008	5.0	5.0	5.1	3.2	5.3	
2009	5.2	5.4	5.5	3.5	5.3	
2010	5.2	5.1	5.3	3.2	5.4	
2011	5.3	5.5	5.3	3.6	5.4	
2012	5.3	5.7	5.6	3.6	5.4	
2013	5.3	5.8	6.0	3.6	5.3	
2014	5.8	6.3	5.7	4.1	5.8	
2015	6.0	6.3	6.1	4.5	6.1	
2016	6.0	7.0	5.8	4.1	6.0	
2017	5.9	6.4	6.3	4.3	5.9	
2018	6.0	6.9	6.9	3.9	5.8	
LOEC (Age ≥ 50)						
	All Races	Hispanic	NH Asian/Pacific Islander	NH Black	NH White	
1995	65.8	46.5	33.6	48.7	70.3	
1996	68.3	45.4	35.6	53.2	72.9	
1997	67.7	46.7	33.0	51.8	72.2	
1998	67.7	48.9	36.8	53.3	71.8	
1999	67.1	46.4	37.8	52.8	71.3	
2000	65.6	49.3	33.1	53.0	69.6	
2001	67.4	47.9	35.7	54.7	71.6	
2002	66.3	50.2	36.5	55.3	69.9	
2003	64.2	48.2	37.1	56.4	67.4	
2004	64.5	51.1	39.2	57.2	67.5	
2005	65.4	49.4	39.0	57.9	68.8	
2006	65.7	49.9	40.2	59.7	69.1	
2007	66.9	49.6	43.9	61.6	70.2	
2008	68.2	52.6	41.6	64.6	71.6	
2009	70.0	53.3	45.7	67.0	73.3	
2010	70.6	54.0	47.4	66.7	74.1	
2011	71.6	57.9	45.9	70.3	74.6	
2012	72.7	57.9	46.6	71.1	76.0	
2013	73.1	60.3	49.6	70.7	76.1	
2014	74.0	60.7	49.2	75.2	76.7	
2015	75.0	62.9	51.5	75.1	77.6	
2016	77.2	65.0	51.8	77.4	80.0	
2017	76.6	62.4	55.4	78.7	79.0	
2018	76.7	64.8	56.2	81.4	78.3	

NH=Non-Hispanic.

Supplementary Table 3. Average Annual Percent Change (AAPC) in Race/Ethnic-Specific Age-Adjusted Incidence Rates (AAIRs) with 95% Confidence Interval (CI) and P-Value for Trend Significance, Early-Onset Endometrial Cancer (EOEC) and Late-Onset Endometrial Cancer (LOEC), 1995-2018, United States

	EOEC (Age <50)			LOEC (Age ≥ 50)		
	AAPC	95% CI	P-Value	AAPC	95% CI	P-Value
All Races	1.8	1.7 - 2.0	<0.001	0.7	0.5 - 0.9	<0.001
Hispanic	2.8	2.5 - 3.1	<0.001	1.7	1.5 - 1.9	<0.001
NH Asian/Pacific Islander	2.1	1.7 - 2.4	<0.001	2.4	2.2 - 2.7	<0.001
NH Black	3.5	3.0 - 4.0	<0.001	2.3	2.1 - 2.4	<0.001
NH White	1.4	1.3 - 1.6	<0.001	0.6	0.4 - 0.8	<0.001

NH=Non-Hispanic.

Supplementary Figure 1. Consort Diagram of Case Selection

