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eTable 1. Classification of Covariates into Pathophysiological, Therapeutic, and Societal Domains for Racial and Ethnic Disparity.

Tumor-related		Treatment-related		Sociodemographic	
SEER Variable Name	Clinical/Social Definition	SEER Variable Name	Clinical/Social Definition	SEER Variable Name	Clinical/Social Definition
Summary_stage	SEER Summary Stage (2018)	Surg_Prim_Site	Surgery of Primary Site	Race	Race/Ethnicity
Stage_Group	AJCC Stage Group	Surg_Rad_Seq	Sequence of Surgery & Radiation	Sex	Biological Sex
ICD_O_3_Hist_behav	Histologic Type & Behavior Code	Radiation_recode	Radiation Therapy Received	Age	Age at Diagnosis (years)
Primary_Site	Anatomic Site of Primary Tumor	Chemotherapy_recode	Chemotherapy Received	Marital_status	Marital Status at Diagnosis
		Surg_Oth_Reg_Dis	Surgery to Other Regional/Distant Sites	Median_household_income	Neighborhood SES
		Reason_no_cancer_directed_surgery	Reason for No Cancer-Directed Surgery	Rural_Urban_Continuum_Code	Rural-Urban Classification
		Scope_Reg_LN_Sur	Scope of Regional Lymph Node Surgery	Period	Diagnosis Era (5-year intervals)

Abbreviations: SES, Socioeconomic Status.

eTable 2. List of Specific Causes of Death Grouped into "Other Cancer" and "Non-Cancer" Categories.

Other Cancer	Non-Cancer
Miscellaneous Malignant Cancer, Liver, Larynx , Rectum and Rectosigmoid Junction , Urinary Bladder , Breast , Prostate , Intrahepatic Bile Duct ,Non-Hodgkin Lymphoma , Pancreas , Ovary , Colon excluding Rectum , Esophagus ,Other Lymphocytic Leukemia , Vulva , Brain and Other Nervous System , Non-Melanoma Skin ,Acute Lymphocytic Leukemia , Kidney and Renal Pelvis , Oropharynx , Stomach , Myeloma , Uterus, NOS , Stomach and Duodenal Ulcers , Bones and Joints , Acute Myeloid Leukemia , Other Endocrine including Thymus , Corpus Uteri , Chronic Lymphocytic Leukemia , Melanoma of the Skin , Other Digestive Organs , Soft Tissue including Heart , Anus, Anal Canal and Anorectum , Other Urinary Organs , Hypopharynx , Aleukemic, Subleukemic and NOS , Gallbladder , Cervix Uteri , Trachea, Mediastinum and Other Respiratory Organs ,Small Intestine , Other Acute Leukemia , Ureter , Other Oral Cavity and	In situ, benign or unknown behavior neoplasm , Other Cause of Death , Nephritis, Nephrotic Syndrome and Nephrosis ,Aortic Aneurysm and Dissection , Other Infectious and Parasitic Diseases including HIV , Cerebrovascular Diseases , Pneumonia and Influenza , Accidents and Adverse Effects , Septicemia , Symptoms, Signs and Ill-Defined Conditions ,Diabetes Mellitus , Alzheimers (ICD-9 and 10 only) , Chronic Liver Disease and Cirrhosis ,Complications of Pregnancy, Childbirth,Puerperium ,Hypertension without Heart Disease , Suicide and Self-Inflicted Injury ,Atherosclerosis , Other Diseases of Arteries, Arterioles, Capillaries , Congenital Anomalies , Homicide and Legal Intervention , Certain Conditions Originating in Perinatal Period

Pharynx , Chronic Myeloid Leukemia ,
Thyroid , Tonsil , Lung and Bronchus

eTable 3. Cumulative incidence of all-cause, cancer-specific, other cancer, and non-cancer death at 1, 3, 5, and 10 years among patients with pulmonary neuroendocrine neoplasms, by race/ethnicity.

Race	Status	1y(95% CI)	3y(95% CI)	5y(95% CI)	10y(95% CI)
All	All-causes	64.4 [64.1, 64.7]	84.1 [83.9, 84.3]	87.4 [87.2, 87.6]	91.6 [91.4, 91.8]
All	PNEN	59.3 [58.9, 59.6]	77 [76.8, 77.3]	79.3 [79, 79.6]	81.1 [80.8, 81.3]
All	Other cancer	1.1 [1.1, 1.2]	1.6 [1.5, 1.7]	1.8 [1.7, 1.9]	2.1 [2, 2.2]
All	Other non-cancer cause	4 [3.8, 4.1]	5.3 [5.1, 5.4]	6.1 [5.9, 6.2]	7.9 [7.7, 8]
White	All-causes	64.8 [64.5, 65.1]	84.4 [84.1, 84.6]	87.7 [87.5, 87.9]	91.8 [91.6, 92]
White	PNEN	59.7 [59.4, 60.1]	77.5 [77.2, 77.8]	79.8 [79.5, 80]	81.5 [81.2, 81.8]
White	Other cancer	1.1 [1, 1.2]	1.6 [1.5, 1.7]	1.8 [1.7, 1.9]	2.1 [2, 2.2]
White	Other non-cancer cause	3.9 [3.8, 4]	5.2 [5.1, 5.4]	6.1 [5.9, 6.2]	7.8 [7.6, 8]
Black	All-causes	63.7 [62.6, 64.8]	85.1 [84.3, 86]	88.7 [87.9, 89.4]	93 [92.4, 93.6]
Black	PNEN	57.6 [56.5, 58.7]	76.8 [75.8, 77.7]	79.5 [78.6, 80.4]	81.4 [80.5, 82.2]
Black	Other cancer	1.4 [1.1, 1.6]	2 [1.7, 2.3]	2.2 [1.8, 2.5]	2.5 [2.2, 2.9]
Black	Other non-cancer cause	4.6 [4.1, 5.1]	6.2 [5.6, 6.7]	6.8 [6.2, 7.4]	8.5 [7.9, 9.1]
Hispanic	All-causes	59.8 [58.4, 61.3]	77.3 [76, 78.5]	80.6 [79.4, 81.8]	85.7 [84.6, 86.7]
Hispanic	PNEN	54.6 [53.2, 56.1]	69.7 [68.3, 71]	71.8 [70.5, 73.1]	73.5 [72.2, 74.8]

Hispanic	Other cancer	1.1 [0.8, 1.4]	1.8 [1.4, 2.2]	2 [1.6, 2.4]	2.4 [2, 2.9]
Hispanic	Other non-cancer cause	3.5 [3, 4]	4.7 [4.1, 5.3]	5.6 [4.9, 6.3]	7.8 [7, 8.6]
API	All-causes	64.1 [62.4, 65.9]	84.3 [82.9, 85.6]	87.6 [86.4, 88.8]	91.8 [90.7, 92.8]
API	PNEN	58 [56.2, 59.8]	76.1 [74.6, 77.6]	78.6 [77.1, 80.1]	80.6 [79.2, 82]
API	Other cancer	1 [0.7, 1.4]	1.4 [1, 1.9]	1.6 [1.2, 2.1]	2.1 [1.6, 2.6]
API	Other non-cancer cause	4.5 [3.7, 5.2]	5.6 [4.8, 6.4]	6.1 [5.2, 6.9]	7.2 [6.3, 8.2]

Abbreviations: PNEN, pulmonary neuroendocrine neoplasms; API, Asian or Pacific Islander.

eTable 4. Five-Year Cumulative Incidence (%) of Vital Status by Race/Ethnicity and Period, 2000–2014.

race	period	All-cause, % (95% CI)	PNEN, % (95% CI)	Other Cancer Death, % (95% CI)	Non-Cancer Death, % (95% CI)
All	2000-2004	88.8 [88.5, 89.2]	81.6 [81.2, 82.1]	1.5 [1.4, 1.7]	5.6 [5.3, 5.8]
All	2005-2009	87.3 [87.0, 87.7]	79.1 [78.7, 79.6]	1.8 [1.7, 2]	6.2 [5.9, 6.4]
All	2010-2014	86.2 [85.9, 86.6]	77.4 [76.9, 77.9]	2.1 [1.9, 2.2]	6.5 [6.2, 6.7]
All	2000-2014	87.4 [87.2, 87.7]	79.3 [79.1, 79.6]	1.8 [1.7, 1.9]	6.1 [5.9, 6.2]
	Δ Cancer mort, ppt	-2.6	-4.2	0.6	0.9
White	2000-2004	88.9 [88.5, 89.3]	81.8 [81.3, 82.3]	1.5 [1.3, 1.6]	5.6 [5.3, 5.9]
White	2005-2009	87.7 [87.3, 88.1]	79.7 [79.2, 80.2]	1.8 [1.7, 2]	6.1 [5.8, 6.4]
White	2010-2014	86.5 [86.1, 86.9]	77.9 [77.4, 78.4]	2 [1.9, 2.2]	6.4 [6.1, 6.7]
White	2000-2014	87.7 [87.5, 87.9]	79.8 [79.5, 80]	1.8 [1.7, 1.9]	6.1 [5.9, 6.2]
	Δ Cancer mort, ppt	-2.4	-3.9	0.5	0.8
Black	2000-2004	90.5 [89.2, 91.7]	82.3 [80.7, 83.9]	1.9 [1.4, 2.5]	6.1 [5.1, 7.1]
Black	2005-2009	89.1 [87.8, 90.3]	79.7 [78.1, 81.3]	2.3 [1.7, 2.9]	6.8 [5.8, 7.8]
Black	2010-2014	86.8 [85.6, 88.1]	77 [75.4, 78.6]	2.3 [1.7, 2.9]	7.3 [6.3, 8.3]
Black	2000-2014	88.7 [87.9, 89.4]	79.5 [78.6, 80.4]	2.2 [1.8, 2.5]	6.8 [6.2, 7.4]
	Δ Cancer mort, ppt	-3.7	-5.3	0.4	1.2
Hispanic	2000-2004	84.5 [82.5, 86.5]	78.2 [75.9, 80.4]	1.4 [0.8, 2.1]	3.8 [2.8, 4.9]
Hispanic	2005-2009	78.9 [76.9, 81.0]	69.6 [67.4, 71.9]	1.6 [1, 2.3]	6.3 [5.2, 7.5]
Hispanic	2010-2014	79.1 [77.2, 81.1]	68.9 [66.7, 71.1]	2.7 [1.9, 3.5]	6.2 [5.1, 7.4]
Hispanic	2000-2014	80.6 [79.4, 81.8]	71.8 [70.5, 73.1]	2 [1.6, 2.4]	5.6 [4.9, 6.3]

	Δ Cancer mort,					
	ppt	-5.4	-9.3	1.3	2.4	
API	2000-2004	87.9 [85.7, 90.1]	79 [76.2, 81.7]	1.8 [0.9, 2.7]	5.9 [4.3, 7.5]	
API	2005-2009	86.6 [84.4, 88.8]	78 [75.4, 80.6]	1.3 [0.6, 2.1]	5.7 [4.3, 7.2]	
API	2010-2014	88.3 [86.3, 90.2]	78.9 [76.5, 81.3]	1.8 [1, 2.5]	6.5 [5, 7.9]	
API	2000-2014	87.6 [86.4, 88.8]	78.6 [77.1, 80.1]	1.6 [1.2, 2.1]	6.1 [5.2, 6.9]	
	Δ Cancer mort,					
	ppt	0.4	-0.1	0	0.6	

Abbreviations: PNEN, pulmonary neuroendocrine neoplasms; API, Asian or Pacific Islander.

Δ: Absolute change in 5-year cumulative cancer mortality (percentage points).

eTable 5. Time Ratios (TR) for All-Cause and Cause-Specific Mortality in the Carcinoid Tumor Subgroup by Race/Ethnicity, 2000–2019.

Race	Period	All-cause(95% CI)	Carcinoid (95% CI)	Other cancer(95% CI)	Other non-cancer cause(95% CI)
White	2000-2004	1.00 (Reference)	1.00 (Reference)	1.00 (Reference)	1.00 (Reference)
White	2010-2014	1.14 (0.92-1.40)	1.32 (0.92-1.89)	0.86 (0.56-1.32)	1.12 (0.83-1.53)
White	2005-2009	1.11 (0.89-1.38)	1.05 (0.73-1.51)	0.77 (0.50-1.18)	1.40 (1.00-1.94)
White	2015-2019	1.29 (1.05-1.59).	1.28 (0.91-1.81)	0.83 (0.55-1.25)	1.58 (1.16-2.16)*
White	2000-2019	1.00 (Reference)	1.00 (Reference)	1.00 (Reference)	1.00 (Reference)
White	P for trend	0.075	0.044	0.991	0.940
Black	2000-2004	0.38 (0.16-0.91).	0.25 (0.06-0.98)	0.66 (0.08-5.43)	0.47 (0.12-1.91)
Black	2010-2014	0.50 (0.23-1.08)	0.43 (0.12-1.51)	0.74 (0.13-4.29)	0.51 (0.16-1.58)
Black	2005-2009	0.42 (0.18-0.99)	0.26 (0.07-0.96)	0.76 (0.09-6.25)	0.57 (0.14-2.29)
Black	2015-2019	0.66 (0.32-1.36)	0.80 (0.23-2.82)	0.59 (0.14-2.40)	0.60 (0.22-1.69)
Black	2000-2019	0.44 (0.35-0.55)***	0.36 (0.25-0.52)***	0.78 (0.48-1.28)	0.43 (0.30-0.60)***
Black	P for trend	0.954	0.439	0.039	0.940
Hispanic	2000-2004	1.03 (0.32-3.24)	0.49 (0.10-2.36)	133765065.99 (0.00-Inf)	1.63 (0.22-11.97)
Hispanic	2010-2014	1.52 (0.62-3.73)	2.03 (0.40-10.16)	0.82 (0.17-3.83)	1.58 (0.41-6.12)
Hispanic	2005-2009	1.38 (0.54-3.51)	1.99 (0.36-11.16)	0.82 (0.16-4.23)	1.29 (0.33-5.01)
Hispanic	2015-2019	1.46 (0.69-3.12)	1.53 (0.43-5.41)	1.05 (0.24-4.58)	1.59 (0.50-5.05)
Hispanic	2000-2019	1.21 (0.94-1.56)	1.21 (0.79-1.86)	1.24 (0.76-2.03)	1.18 (0.80-1.75)
Hispanic	P for trend	0.954	0.439	0.166	0.940
API	2000-2004	0.74 (0.13-4.08)	0.61 (0.04-9.19)	0.21 (0.02-1.72)	6.29 (0.04-1120.37)
API	2010-2014	1.45 (0.32-6.55)	1.06 (0.11-10.58)	0.49 (0.06-4.02)	6.74 (0.17-266.68)
API	2005-2009	1.17 (0.24-5.59)	0.47 (0.06-3.64)	104106058.52 (0.00-Inf)	2.62 (0.13-53.16)

API	2015-2019	1.35 (0.40-4.61)	0.72 (0.13-4.05)	1.04 (0.09-11.59)	4.15 (0.30-57.01)
API	2000-2019	1.05 (0.69-1.60)	0.59 (0.33-1.08)	0.81 (0.40-1.66)	3.37 (1.32-8.60).
API	P for trend	0.954	0.226	0.430	0.940

Abbreviations: API, Asian or Pacific Islander. *P < 0.05; ***P < 0.001.

eTable 6. Time Ratios (TR) for All-Cause and Cause-Specific Mortality in the Small Cell Carcinoma Subgroup by Race/Ethnicity, 2000–2019.

Race	Period	All-cause	SCLC	Other cancer	Other non-cancer cause
White	2000-2004	1.00 (Reference)	1.00 (Reference)	1.00 (Reference)	1.00 (Reference)
White	2010-2014	1.00 (0.97-1.04)	1.03 (0.99-1.07)	0.60 (0.46-0.78)**	0.78 (0.66-0.91)**
White	2005-2009	1.00 (0.97-1.04)	1.02 (0.99-1.06)	0.71 (0.54-0.93)*	0.78 (0.67-0.92)**
White	2015-2019	1.13 (1.09-1.17)***	1.19 (1.14-1.23)***	0.66 (0.50-0.86)*	0.62 (0.53-0.72)***
White	2000-2019	1.00 (Reference)	1.00 (Reference)	1.00 (Reference)	1.00 (Reference)
White	P for trend	<0.001	<0.001	0.785	0.008
Black	2000-2004	0.96 (0.82-1.11)	0.98 (0.83-1.15)	0.56 (0.18-1.67)	0.75 (0.38-1.47)
Black	2010-2014	1.18 (1.02-1.37)*	1.26 (1.08-1.47)***	0.49 (0.19-1.28)	0.61 (0.34-1.09)
Black	2005-2009	1.04 (0.90-1.21)	1.11 (0.95-1.30)	0.38 (0.15-1.01)	0.56 (0.31-1.04)
Black	2015-2019	1.23 (1.06-1.43)***	1.38 (1.18-1.62)***	0.47 (0.18-1.21)	0.38 (0.22-0.63)***
Black	2000-2019	1.07 (1.03-1.12)**	1.12 (1.07-1.17)***	0.65 (0.49-0.86)*	0.69 (0.58-0.82)***
Black	P for trend	0.103	0.029	0.864	0.285
Hispanic	2000-2004	0.87 (0.71-1.06)	0.84 (0.68-1.04)	0.72 (0.15-3.41)	1.80 (0.59-5.51)
Hispanic	2010-2014	0.99 (0.82-1.20)	1.04 (0.85-1.27)	0.29 (0.10-0.86)*	0.75 (0.34-1.67)
Hispanic	2005-2009	1.10 (0.91-1.34)	1.14 (0.94-1.40)	0.80 (0.19-3.38)	0.66 (0.30-1.45)
Hispanic	2015-2019	1.14 (0.95-1.37)	1.21 (0.99-1.47)	0.43 (0.14-1.37)	0.65 (0.31-1.36)
Hispanic	2000-2019	1.00 (0.95-1.06)	1.01 (0.95-1.07)	0.67 (0.47-0.95).	1.03 (0.81-1.30)
Hispanic	P for trend	0.030	0.018	0.864	0.353
API	2000-2004	1.28 (1.01-1.64).	1.31 (1.02-1.69).	1.30 (0.18-9.17)	0.93 (0.34-2.58)
API	2010-2014	1.22 (0.98-1.52)	1.25 (0.99-1.57)	1.23 (0.22-6.89)	0.84 (0.34-2.05)
API	2005-2009	1.32 (1.04-1.66)*	1.34 (1.05-1.70)**	1.08 (0.19-6.09)	1.06 (0.40-2.83)

API	2015-2019	1.46 (1.17-1.82)***	1.48 (1.18-1.85)***	1.29 (0.24-6.83)	1.21 (0.48-3.07)
API	2000-2019	1.28 (1.20-1.37)***	1.27 (1.19-1.36)***	1.70 (1.03-2.80)	1.28 (0.98-1.69)
API	P for trend	0.003	<0.001	0.864	0.353

Abbreviations: SCLC, Small Cell Lung Carcinoma; API, Asian or Pacific Islander. *P < 0.05;**P < 0.01;***P < 0.001.

eTable 7. Leading Causes of Non-Cancer Mortality and Their Implications for Health Equity.

Cause of Death	count
Diseases of Heart	3225
Other Cause of Death	2603
Chronic Obstructive Pulmonary Disease and Allied Cond	1994
Cerebrovascular Diseases	585
Pneumonia and Influenza	456
Septicemia	438
Accidents and Adverse Effects	427
In situ, benign or unknown behavior neoplasm	387
Symptoms, Signs and Ill-Defined Conditions	266
Diabetes Mellitus	250
Alzheimers (ICD-9 and 10 only)	209
Other Infectious and Parasitic Diseases including HIV	208
Nephritis, Nephrotic Syndrome and Nephrosis	193
Hypertension without Heart Disease	139
Suicide and Self-Inflicted Injury	114
Chronic Liver Disease and Cirrhosis	107
Aortic Aneurysm and Dissection	67
Other Diseases of Arteries, Arterioles, Capillaries	51
Atherosclerosis	33
Congenital Anomalies	12
Homicide and Legal Intervention	8
Complications of Pregnancy, Childbirth, Puerperium	7
Tuberculosis	4
Certain Conditions Originating in Perinatal Period	4

