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Key Trends in Tracking Supply of and Demand for Oncologists

ASCO
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INTRODUCTION

The Workforce Information System (WIS) builds on ASCO's 2007 workforce study that projected shortages in US oncologist supply by 2020.1 The original study was a landmark analysis for assessing workforce capacity and predicting changes over time. One limitation, however, was that the study relied on a static snapshot of the oncologist workforce. In intervening years, major shifts in the economy, political and regulatory environments, and the healthcare system have altered the relationship between the supply of and demand for cancer services. These factors can also vary dramatically by geography. The WIS provides ASCO with an ongoing method for data collection and reporting on the current status of the oncologist workforce.

This report includes a series of figures and data tables showing trends over time and is organized into three sections: 1) Supply; 2) New Entrants; and 3) Cancer Incidence and Prevalence. It is designed so that it can be used in its entirety as one report, or as individual fact sheets. Since 2014, ASCO has presented key findings from the WIS in the State of Cancer Care in America article series in JCO Oncology Practice. The series uses a data-driven approach to examine oncology practice issues to aid the oncology community, policymakers, and others in shaping the future of cancer care in America. Visit asco.org/state-of-cancer-care to view content from the series.

In general, the report focuses on three main oncology specialties—hematology, hematology/oncology, and medical oncology—but in some cases, data are shown for other oncology specialties and other subspecialties of internal medicine. Herein, this grouping of hematology, hematology/oncology, and medical oncology is presented as "Oncology (Composite)." In many figures and tables, data for the individual specialties are presented as well.

SUPPLY

The **Supply** section of this report features data from two provider databases: the American Medical Association's (AMA) Physician Masterfile and the Centers for Medicare & Medicaid Services' (CMS) Physician Compare dataset. Permission was obtained from the AMA to use Masterfile data; however, the use and reference to AMA data by ASCO should not be construed as endorsement by the AMA, nor do the ideas or opinions expressed herein reflect the views of the AMA. Physician Compare is publicly available from data.medicare.gov.

The data in the **Supply** section focus mainly on active oncologists practicing in one of three specialty areas: hematology, hematology/oncology, or medical oncology. It is important to note that the custom tabulations are based on the physicians' primary specialty listing only. Where informative, benchmark data on "all physicians" are included as a reference.

Figures in the **Supply** section of the report that concern physician demographics (e.g., age and gender) are derived from the AMA Masterfile. The remaining figures represent geographic analyses of practice addresses registered with the Medicare program and made available through Physician Compare. Several of the maps combine practice information with US population data and other demographic attributes by geography provided by the US Census Bureau and the US Department of Agriculture. Detailed methodology is available elsewhere.[2]

1. Erikson C, Salsberg E, Forte G, et al: Future supply and demand for oncologists: Challenges to assuring access to oncology services. *J Oncol Pract* 3:79–86, 2007.
2. Kirkwood MK, Bruinooge SS, Goldstein MA, et al: Enhancing the American Society of Clinical Oncology Workforce Information System With Geographic Distribution of Oncologists and Comparison of Data Sources for the Number of Practicing Oncologists. *Journal Oncol Pract* 10:32-38, 2014.

NEW ENTRANTS

This section focuses on physicians in training, starting with the pipeline of residents who are eligible to enter training in hematology, hematology/oncology, medical oncology, gynecologic oncology, and pediatric hematology/oncology fellowship programs (i.e., residents who completed an internal medicine, obstetric/gynecology, or pediatric residency program) and continuing through to the number completing training in oncology fellowship programs. In addition to demographic comparisons (such as gender, race, and ethnicity), we provide data on the competitiveness of oncology fellowships relative to other internal medicine fellowship programs. Where appropriate, we have included benchmark references of all residents, internal medicine residents, and/or select internal medicine subspecialties.

Data from this section come from three primary sources: 1) annual publications of the *Journal of the American Medical Association*'s (*JAMA's*) Medical Education issue, 2) annual publications of the National Residency Match Program, and 3) data on first time board test-takers as published online by the American Board of Internal Medicine (ABIM).

CANCER INCIDENCE AND PREVALENCE

The **Cancer Incidence and Prevalence** section presents the latest available data on cancer incidence and prevalence, showing the trends in the number of new cases and number of survivors. Survivor data is presented in terms of five-year survival rates as well as anyone with a history of cancer.

Data for the **Cancer Incidence and Prevalence** section come primarily from two sources: 1) National Cancer Institute (NCI) publications focusing on analysis of the Surveillance Epidemiology and End Results Cancer Statistics Review, and 2) the American Cancer Society's annual publication, Cancer Facts and Figures, which is jointly prepared with the NCI.

LIMITATIONS OF THE DATA

Much of the data from the Supply section of this report come from the AMA Physician Masterfile. Although the Masterfile was not designed for workforce analysis, it is commonly used because it captures detailed demographic and practice information for AMA member and nonmember physicians. The AMA makes the full Masterfile available to ASCO and other researchers on an annual basis. The advantage to this is researchers are afforded the flexibility to create custom tabulations of the data. For instance, data on the percentage of oncologists who are age 64 or older are only obtainable by using the Masterfile itself.

Despite the flexibility of using the full Masterfile, there are disadvantages to using it as a source of data on oncologists. A physician's activity status comes from the AMA's Census of Physicians. A physician typically receives the AMA's Census every three to four years, which may result in a lag in changing a physician's status from active to inactive. Because much of the information is self-reported through the AMA Census, there are also issues with interpretation (e.g., which specialty field a physician chooses as his/her primary specialty) and with missing fields. In addition, physician board certification information is not available through the Masterfile.

In order to assess the geographic distribution of oncologists, we used a second data source for the Supply section: the CMS Physician Compare database. Physician Compare is a publicly available data set that stores information on US healthcare providers, specifically those who have submitted a Medicare Fee-for-Service claim or enrolled in the Provider Enrollment, Chain, and Ownership System (PECOS) within the prior six months. The data are the most up-to-date available, to our knowledge, and provide individual-level addresses for physician practice locations (and secondary practice locations, where applicable). Physician Compare does not provide demographic and practice information important for workforce montoring (e.g., age and employment setting), so cannot replace the AMA Masterfile as a the primary Supply data source. Furthermore, because it stems from Medicare billing, it cannot be used to track the pediatric hematologist-oncologist workforce.

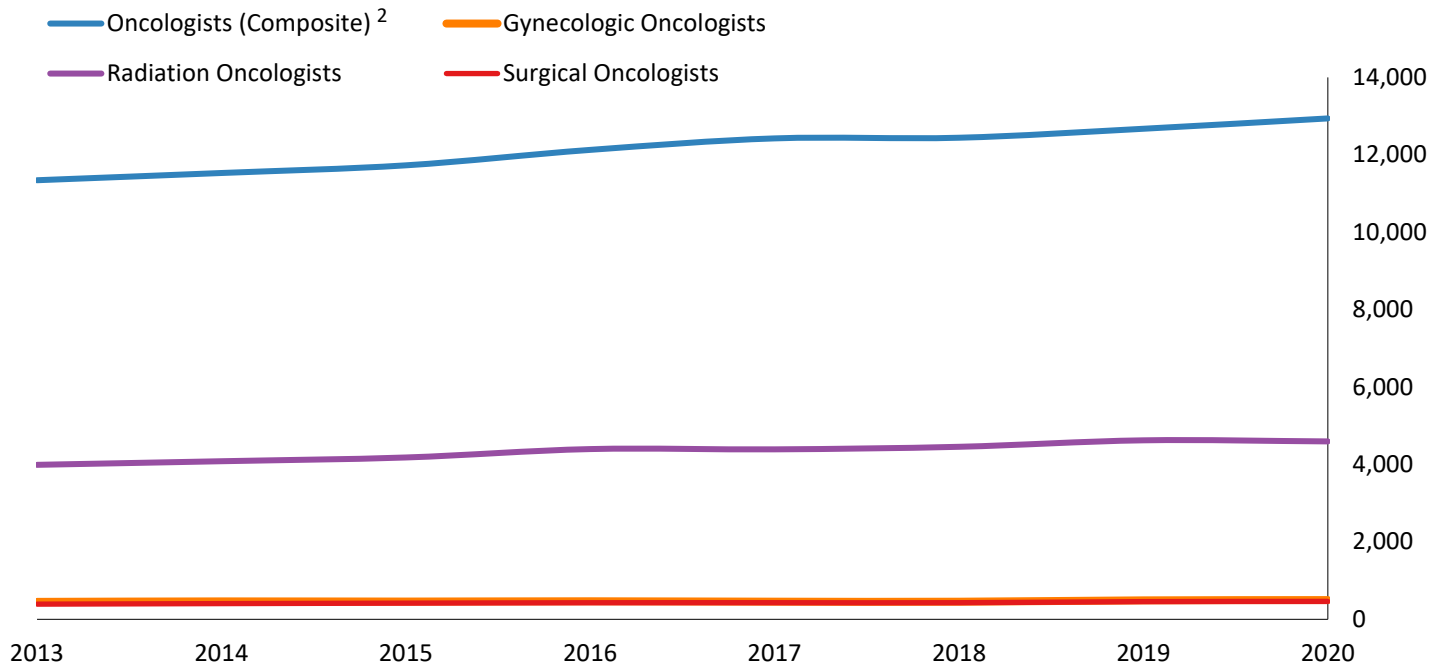
Much of the data from the New Entrant section come from JAMA. The published data in JAMA are derived from the AAMC/AMA National GME Census and represent an undercount of residents and fellows, as they do not account for late reporting. Furthermore, the GME Census represents ACGME programs only. However, there are less than 10 osteopathic GME programs in hematology and oncology, with fewer than 30 positions.

For purposes of annual tracking in the WIS, ASCO uses high-level data from the NCI and the American Cancer Society for the Cancer Incidence and Prevalence section. ASCO acknowledges that these statistics do not adequately represent demand for cancer care services in the United States. In 2014, ASCO published an updated demand methodology and projections.[3]

3. Yang W, Williams JH, Hogan PF, et al: Projected supply of and demand for oncologists and radiation oncologists through 2025: an aging, better-insured population will result in shortage. *J Oncol Pract* 10:39-45, 2014.

Key Trends in Tracking Supply of and Demand for Oncologists

Figure 1a. Number of Oncologists Engaged in Patient Care (CMS Physician Compare)[1]



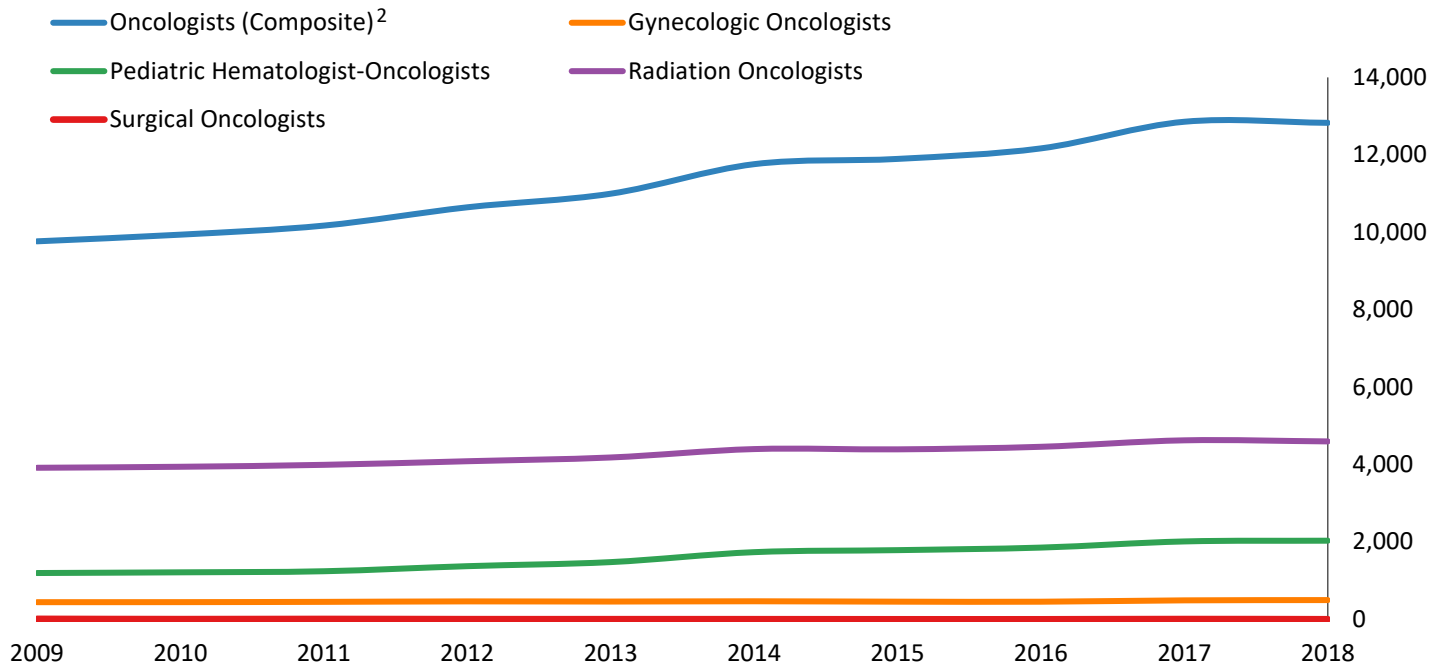
	2013	2014	2015	2016	2017	2018	2019	2020
Number of Oncologists (Composite)[2]	11,343	11,530	11,728	12,127	12,424	12,441	12,673	12,940
Hematologists	1,469	1,450	1,420	1,410	1,377	1,335	1,262	1,239
Hematologists/Oncologists	4,400	4,903	5,345	6,197	6,482	6,891	7,848	7,913
Medical Oncologists	4,302	4,291	4,230	4,151	4,035	3,940	3,744	3,674
Gynecologic Oncologists	451	463	459	466	456	455	490	497
Radiation Oncologists	3,991	4,084	4,181	4,398	4,391	4,457	4,624	4,596
Surgical Oncologists	392	406	418	428	429	429	457	463
Annual percent change in number of:								
Oncologists (Composite)[2]		1.6	1.7	3.4	2.4	0.1	1.9	2.1
Hematologists		-0.4	0.7	-0.5	2.4	1.4	4.5	0.4
Hematologists/Oncologists		1.9	0.8	3.2	2.3	-0.7	0.8	1.6
Medical Oncologists		1.5	4.5	4.8	3.0	2.0	4.0	3.9
Gynecologic Oncologists		2.2	1.7	2.0	2.3	-1.7	1.8	3.1
Radiation Oncologists		1.8	1.5	2.8	1.7	0.6	1.7	1.5
Surgical Oncologists		4.6	6.0	6.1	4.3	2.8	6.0	2.2

Source: CMS Physician Compare, April 2020 update

1 These data represent all physicians (MDs and DOs) with an oncology or hematology primary specialty and a US practice address in CMS Physician Compare.The Pediatric Hematology-Oncology specialty is not reported in Physician Compare.

2 The data for oncologists include all physicians (MDs and DOs) with a primary specialty of hematology, hematology/oncology, or medical oncology in Physician Compare.

Figure 1b. Number of Oncologists Engaged in Patient Care (AMA Masterfile)[1]



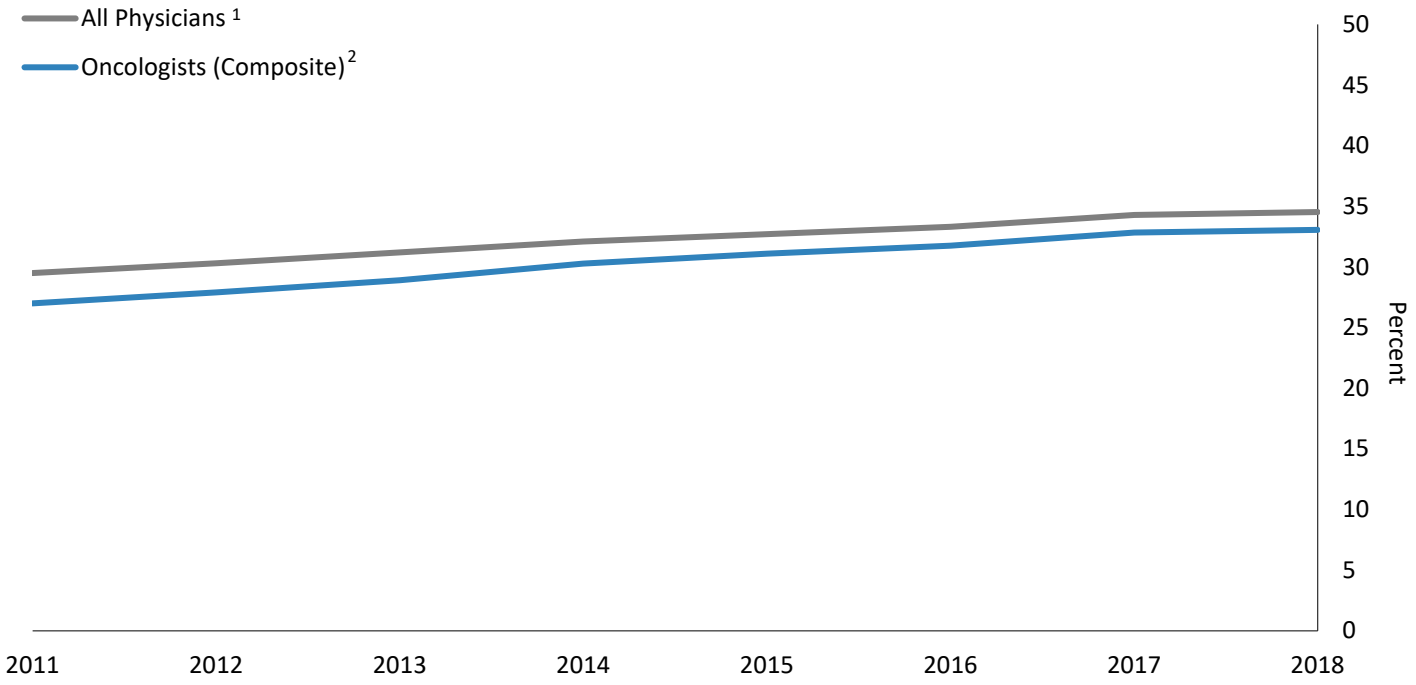
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Number of Oncologists (Composite)[2]	9,765	9,937	10,171	10,644	10,995	11,758	11,894	12,166	12,854	12,826
Hematologists	1,570	1,523	1,469	1,450	1,420	1,410	1,377	1,335	1,262	1,239
Hematologists/Oncologists	3,706	3,997	4,400	4,903	5,345	6,197	6,482	6,891	7,848	7,913
Medical Oncologists	4,489	4,417	4,302	4,291	4,230	4,151	4,035	3,940	3,744	3,674
Gynecologic Oncologists	443	444	451	463	459	466	456	455	490	497
Pediatric Hematologists/Oncologists	1,196	1,214	1,242	1,373	1,478	1,735	1,787	1,853	2,012	2,031
Radiation Oncologists	3,915	3,941	3,991	4,084	4,181	4,398	4,391	4,457	4,624	4,596
Surgical Oncologists	344	360	392	406	418	428	429	429	457	463
Annual percent change in number of:										
Oncologists (Composite)[2]	2.1	1.8	2.4	4.7	3.3	6.9	1.2	2.3	5.7	-0.2
Hematologists	-1.8	-3.0	-3.5	-1.3	-2.1	-0.7	-2.3	-3.1	-5.5	-1.8
Hematologists/Oncologists	8.1	7.9	10.1	11.4	9.0	15.9	4.6	6.3	13.9	0.8
Medical Oncologists	-1.1	-1.6	-2.6	-0.3	-1.4	-1.9	-2.8	-2.4	-5.0	-1.9
Gynecologic Oncologists	1.1	0.2	1.6	2.7	-0.9	1.5	-2.1	-0.2	7.7	1.4
Pediatric Hematologist-Oncologists	0.7	1.5	2.3	10.5	7.6	17.4	3.0	3.7	8.6	0.9
Radiation Oncologists	0.8	0.7	1.3	2.3	2.4	5.2	-0.2	1.5	3.7	-0.6
Surgical Oncologists	11.3	4.7	8.9	3.6	3.0	2.4	0.2	0.0	6.5	1.3

Source: AMA Physician Masterfile, August 2018 update

1 The data shown here represent the number of physicians (MDs and DOs, excluding residents/fellows) whose major professional activity is direct patient care. The data refer to physicians active in the US only. In cases where a physician's office state was missing, the state from the preferred mailing address was used.

2 The data for oncologists include all physicians (MDs and DOs, excluding residents/fellows) who specified hematology, hematology/oncology, or medical oncology as their primary specialty on the AMA Census of Physicians.

Figure 2. Percentage of Oncologists Who Are Female



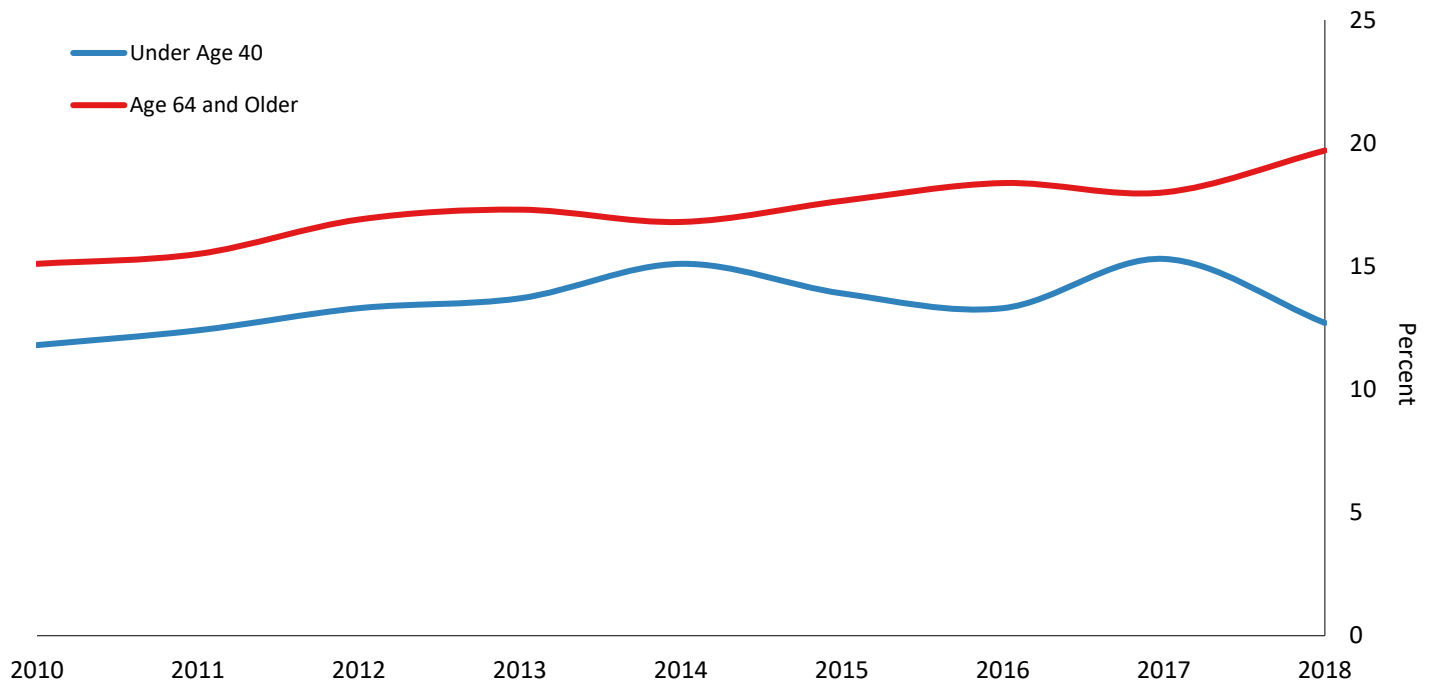
	2011	2012	2013	2014	2015	2016	2017	2018
Total number of physicians[1]	676,022	694,601	706,626	744,493	741,396	751,676	778,731	775,787
Physicians who are female	199,244	210,639	220,615	239,330	242,767	250,370	267,107	267,883
Percent female	29.5	30.3	31.2	32.1	32.7	33.3	34.3	34.5
Number of Oncologists (Composite)[2]	10,202	10,662	10,977	11,796	11,875	12,147	12,834	12,806
Oncologists who are female	2,751	2,977	3,172	3,571	3,695	3,859	4,216	4,234
Percent female	27.0	27.9	28.9	30.3	31.1	31.8	32.9	33.1
Number of Hematologists	1,491	1,467	1,419	1,426	1,375	1,333	1,259	1,236
Hematologists who are female	395	386	381	391	387	379	367	360
Percent female	26.5	26.3	26.8	27.4	28.1	28.4	29.2	29.1
Number of Hematologist/Oncologists	4,396	4,894	5,333	6,202	6,470	6,879	7,836	7,901
Hematologist/Oncologists who are female	1,430	1,648	1,842	2,216	2,355	2,534	2,925	2,960
Percent female	32.5	33.7	34.5	35.7	36.4	36.8	37.3	37.5
Number of Medical Oncologists	4,315	4,301	4,225	4,168	4,030	3,935	3,739	3,669
Medical Oncologists who are female	926	943	949	964	953	946	924	914
Percent female	21.5	21.9	22.5	23.1	23.6	24.0	24.7	24.9

Source: AMA Physician Masterfile, August 2018 update

1 The data shown here are based on the number of physicians (MDs and DOs, excluding residents/fellows) whose major professional activity is direct patient care and whose sex is known. The data refer to physicians active in the US only. In cases where a physician's office state was missing, the state from the preferred mailing address was used.

2 The data for oncologists include all physicians (MDs and DOs, excluding residents/fellows) who specified hematology, hematology/oncology, or medical oncology as their primary specialty on the AMA Census of Physicians.

Figure 3. Percentage of Oncologists[1] by Age Group

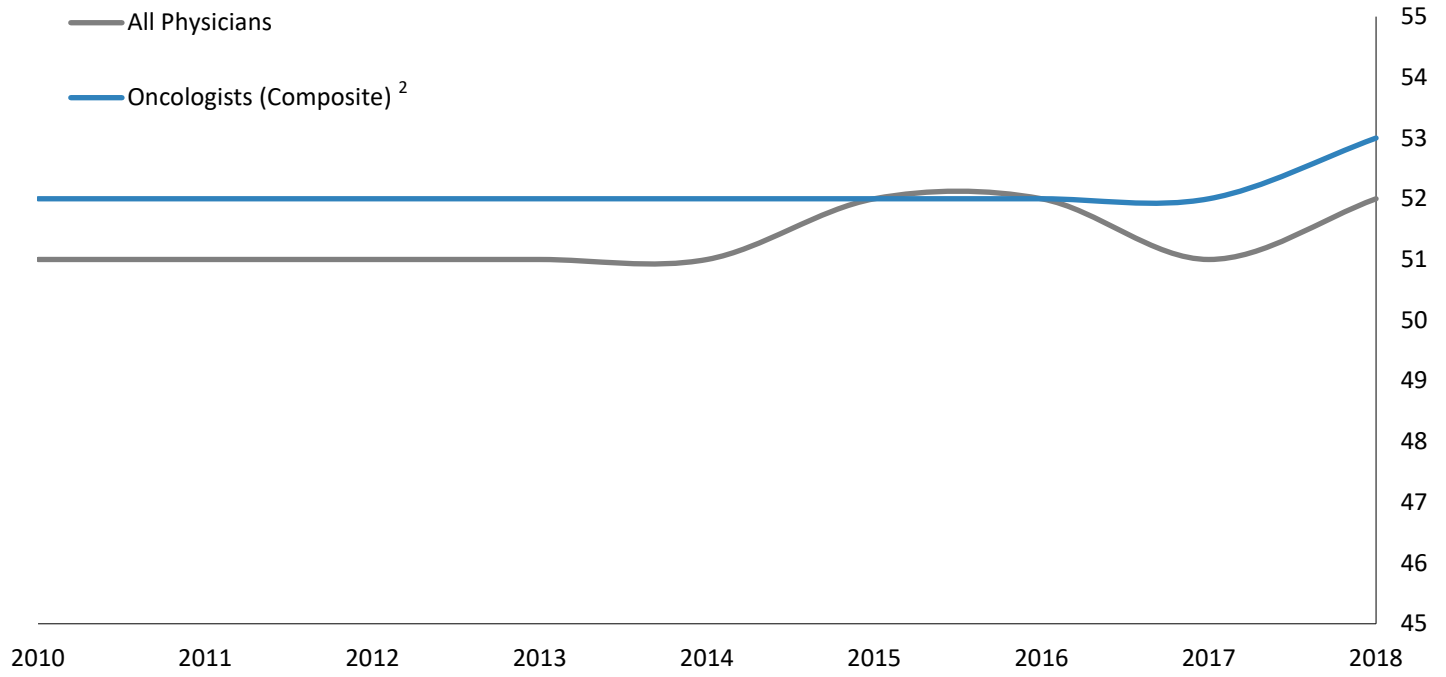


	2010	2011	2012	2013	2014	2015	2016	2017	2018
Number of oncologists under age 40	1,177	1,262	1,423	1,508	1,778	1,654	1,617	1,966	1,632
Percentage of oncologists under age 40	11.8	12.4	13.3	13.7	15.1	13.9	13.3	15.3	12.7
Number of oncologists age 64 or older	1,504	1,580	1,799	1,903	1,984	2,100	2,236	2,315	2,524
Percentage of oncologists age 64 or older	15.1	15.5	16.9	17.3	16.8	17.7	18.4	18.0	19.7

Source: AMA Physician Masterfile, August 2018 update

1 These figures represent the number of physicians (MDs and DOs, excluding residents/fellows) who specified hematology, hematology/oncology, or medical oncology as their primary specialty on the AMA Census of Physicians, whose primary activity is direct patient care, and whose age is known. The data refer to physicians who are active in the US only. In cases where a physician's office state was missing, the state from the preferred mailing address was used.

Figure 4. Median Age of Oncologists



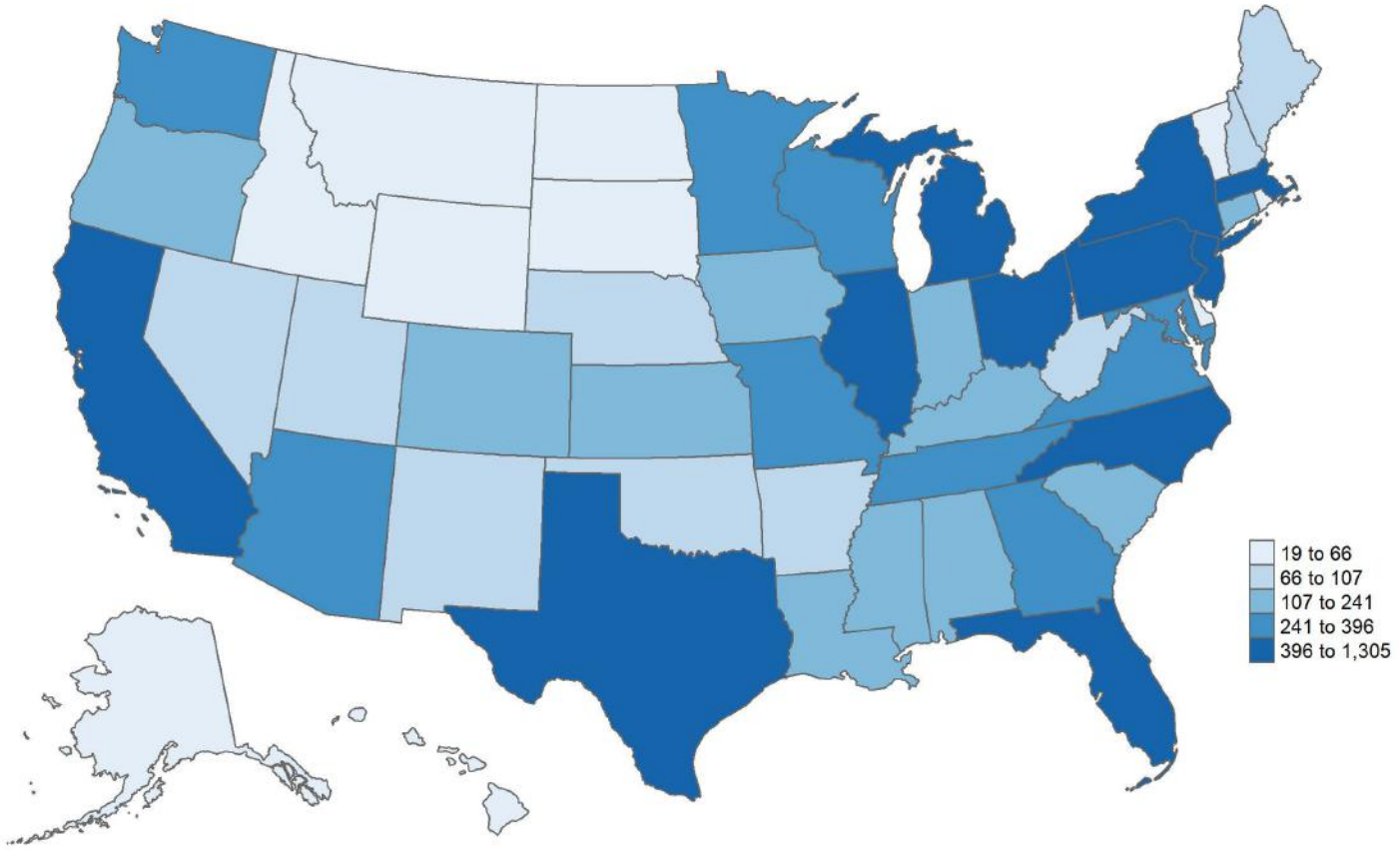
	2010	2011	2012	2013	2014	2015	2016	2017	2018
Median age of all physicians[1]	51	51	51	51	51	52	52	51	52
Median age of oncologists (composite)[2]	52	52	52	52	52	52	52	52	53

Source: AMA Physician Masterfile, August 2018 update

1 The data shown here represent the number of physicians (MDs and DOs, excluding residents/fellows) whose major professional activity is direct patient care and whose age is known. The data refer to physicians active in the US only. In cases where a physician's office state was missing, the state from the preferred mailing address was used.

2 These figures represent the number of active physicians (MDs and DOs, excluding residents/fellows) who specified hematology, hematology/oncology, or medical oncology as their primary specialty on the AMA Census of Physicians.

Figure 5. Number of Oncologists by State[1]



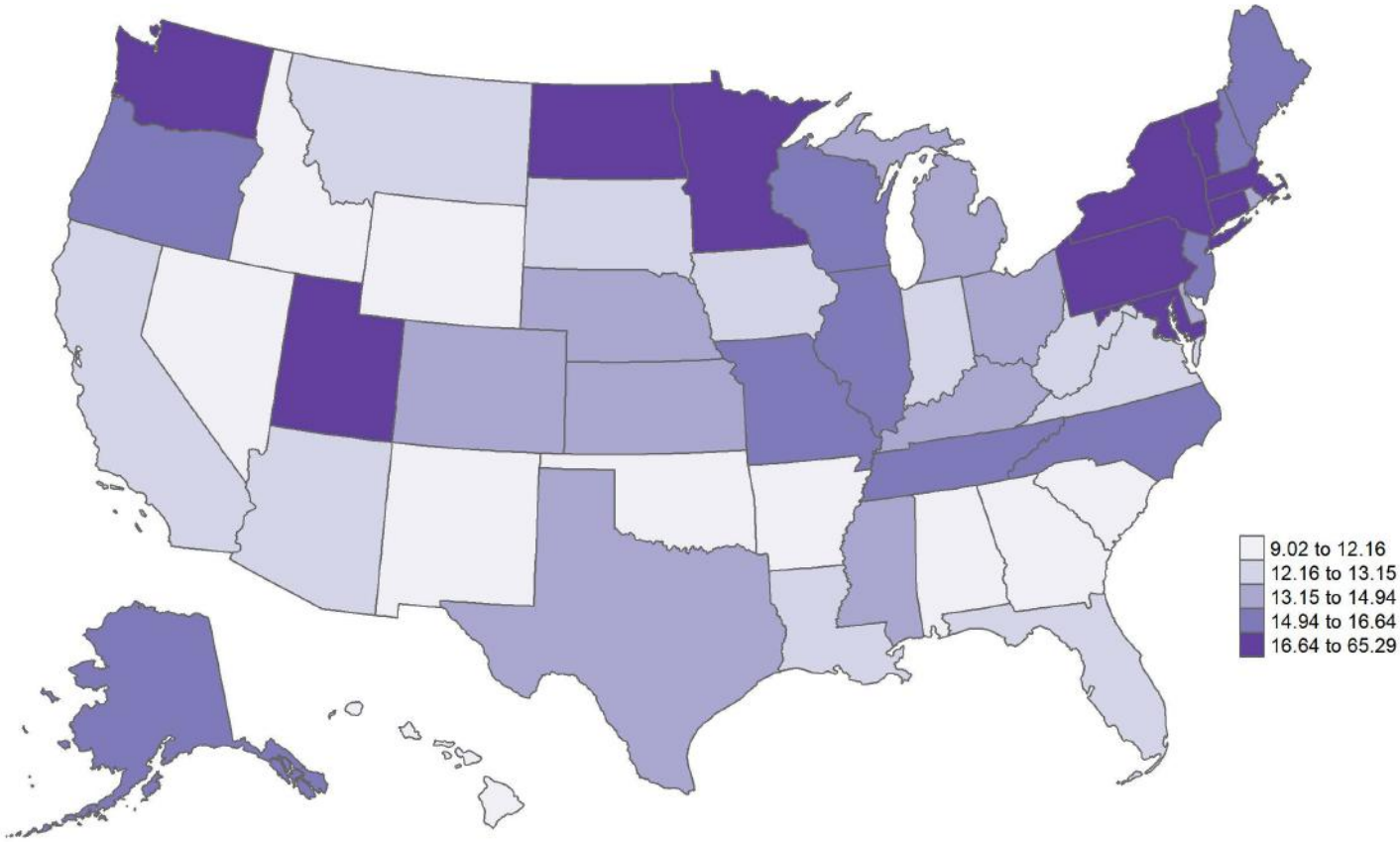
Source: CMS Physician Compare (April 2020) update and US Census Gazetteer Files (2019 update)

State (Number of Oncologists): Alabama (151), Alaska (28), Arizona (253), Arkansas (87), California (1,305), Colorado (203), Connecticut (193), Delaware (41), District of Columbia (99), Florida (837), Georgia (306), Hawaii (46), Idaho (48), Illinois (532), Indiana (241), Iowa (119), Kansas (107), Kentucky (178), Louisiana (155), Maine (70), Maryland (303), Massachusetts (588), Michigan (396), Minnesota (335), Mississippi (112), Missouri (272), Montana (42), Nebraska (76), Nevada (72), New Hampshire (70), New Jersey (411), New Mexico (66), New York (1,183), North Carolina (463), North Dakota (39), Ohio (504), Oklahoma (102), Oregon (185), Pennsylvania (670), Rhode Island (46), South Carolina (145), South Dakota (31), Tennessee (290), Texas (887), Utah (102), Vermont (36), Virginia (284), Washington (370), West Virginia (75), Wisconsin (278), Wyoming (19)

1 The data for oncologists include physicians who specified hematology, hematology/oncology, or medical oncology as their primary specialty in the CMS Physician Compare. Data were accessed from data.medicare.gov. Oncologists were grouped according to the state field of their practice address(es). Oncologists were counted once per state, with 491 of 12,940 oncologists (3.8%) represented in more than one state.

2 Geographic shapefiles were accessed from census.gov/geographies/reference-files/time-series/geo/gazetteer-files.html. Colors were determined by quintiles of the data.

Figure 6a. Oncologists per 100,000 Residents Age 55 Years or Older By State[1,2]

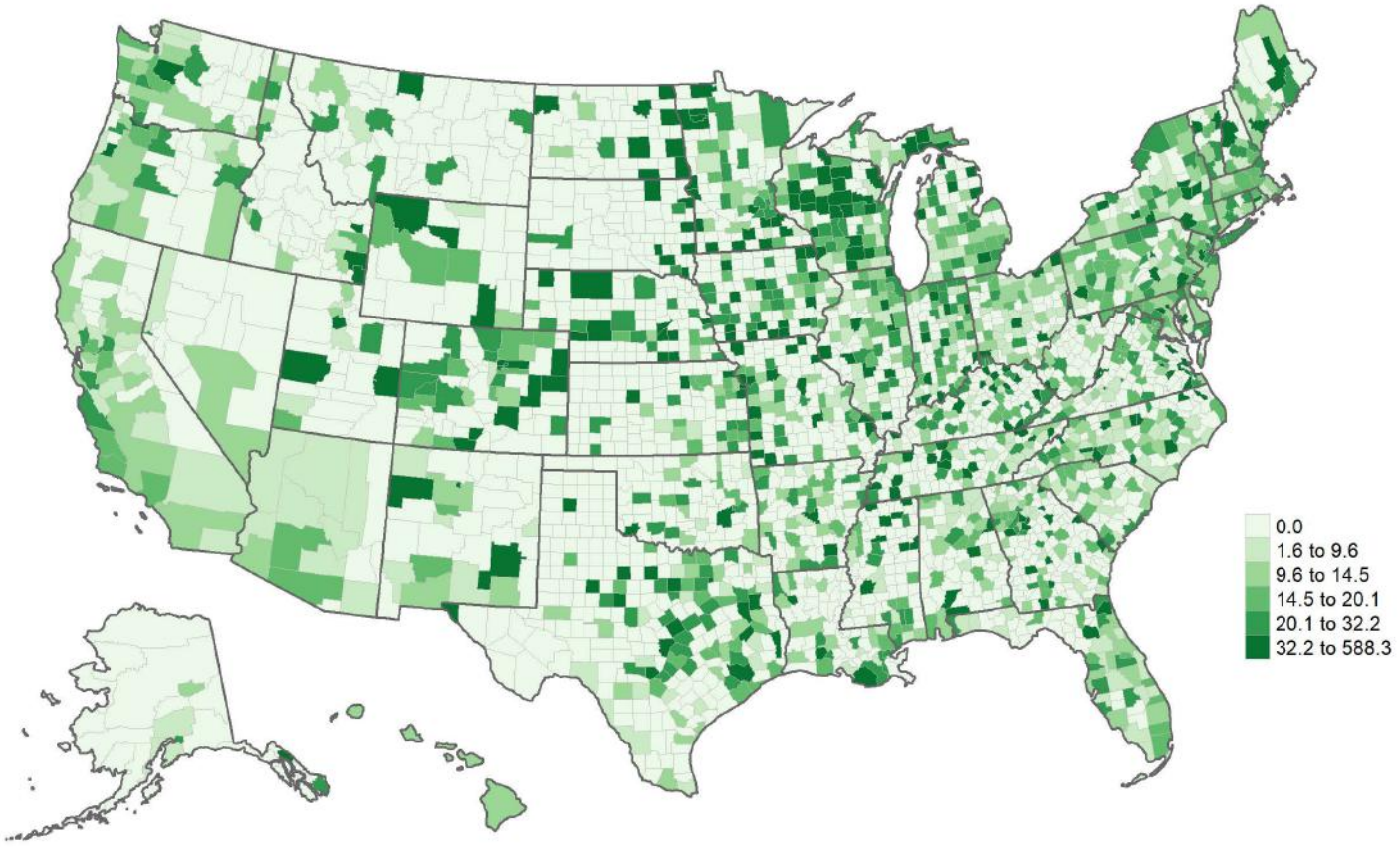


Sources: CMS Physician Compare (April 2020 update), US Census Bureau Gazetteer Files (2019 update)

1 The data for oncologists include physicians who specified hematology, hematology/oncology, or medical oncology as their primary specialty in the CMS Physician Compare. Data were accessed from data.medicare.gov. Oncologists were grouped according to the state field of their practice address(es). Oncologists were counted once per state, with 491 of 12,940 oncologists (3.8%) represented in more than one state.

2 The data were normalized using 2018 population estimates from the US Census Bureau. Geographic shapefiles were accessed from census.gov/geographies/reference-files/time-series/geo/gazetteer-files.html. Residents age 55 years and older were chosen because they account for more than 75% of new cancer cases (see seer.cancer.gov/statfacts/html/all.html). Colors were determined by quintiles of the data.

Figure 6b. Oncologists per 100,000 Residents Age 55 Years or Older By County[1,2]

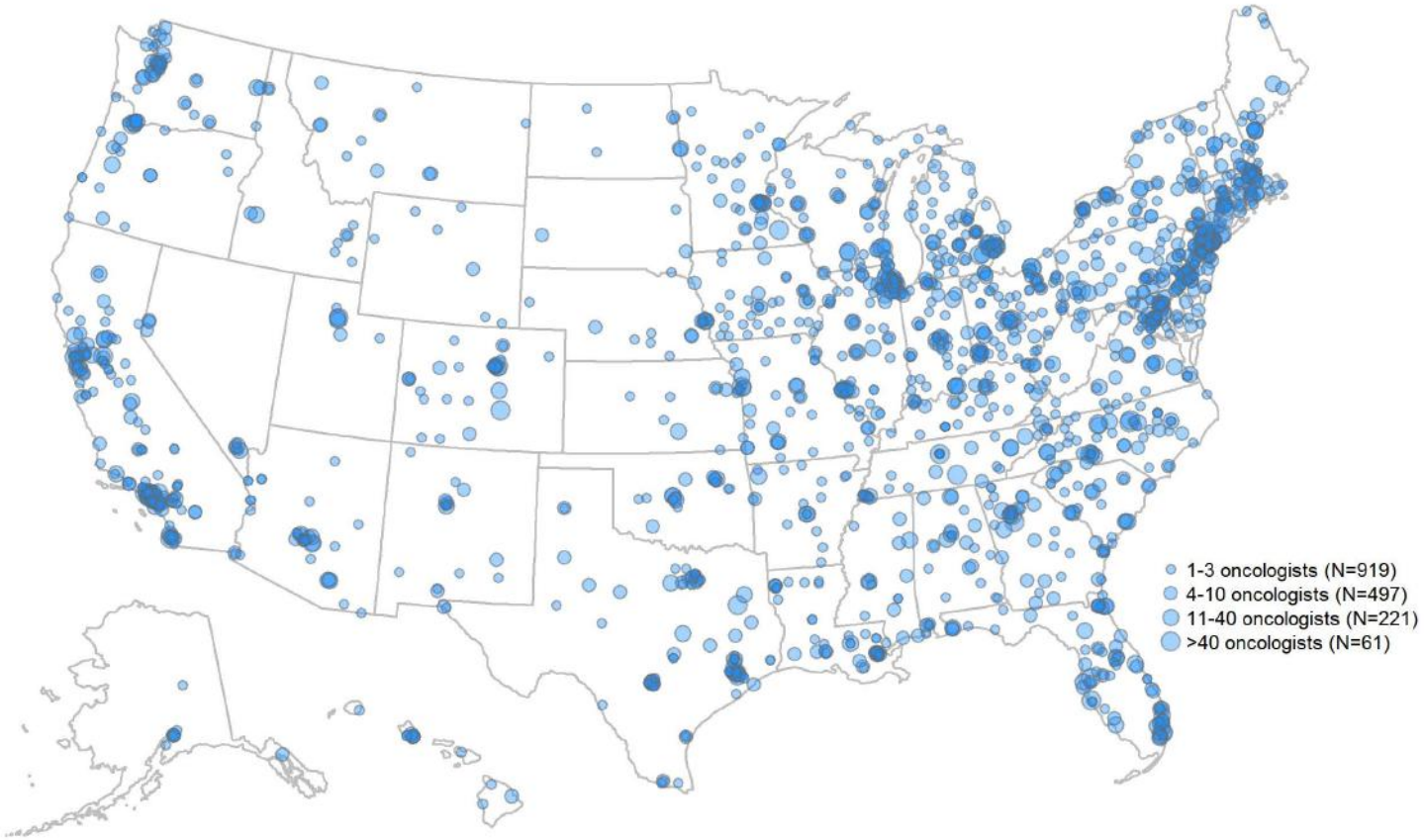


Sources: CMS Physician Compare (April 2020 update), US Census Bureau Gazetteer Files (2019 update)

1 The data for oncologists include physicians who specified hematology, hematology/oncology, or medical oncology as their primary specialty in the CMS Physician Compare. Data were accessed from data.medicare.gov. Oncologists were counted once per county, with 3,361 of 12,940 oncologists (26%) represented in more than one county.

2 The data were normalized using 2018 population estimates from the US Census Bureau. Geographic shapefiles were accessed from census.gov/geographies/reference-files/time-series/geo/gazetteer-files.html. Residents age 55 years and older were chosen because they account for more than 75% of new cancer cases (see seer.cancer.gov/statfacts/html/all.html). Colors were determined by quintiles of the data.

Figure 7. Size and Distribution of Oncology Practices[1,2]

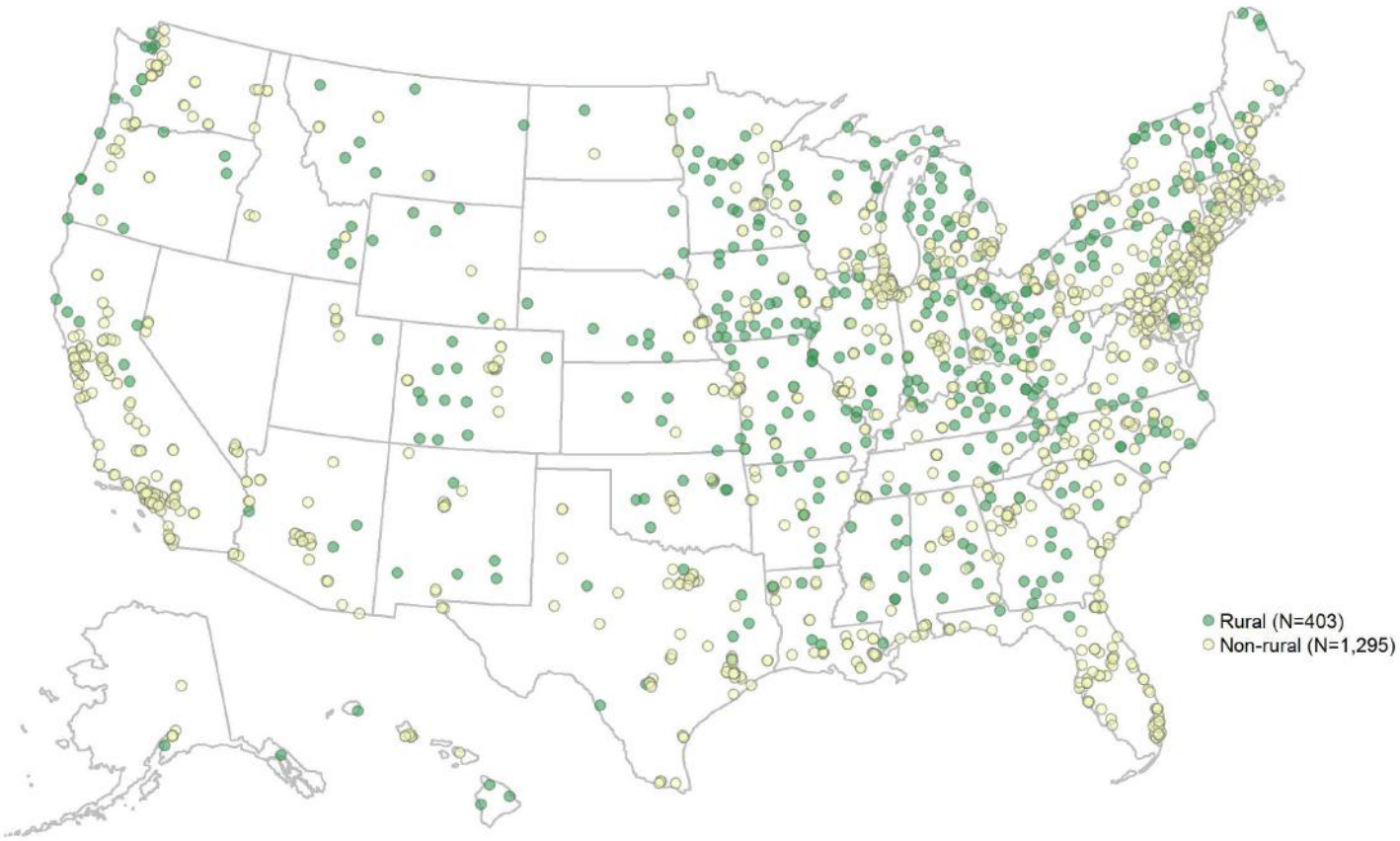


Source: CMS Physician Compare (April 2020 update), U.S. Census Bureau Gazetteer Files (2019 update)

1 Points represent each of 1,698 practices in the US associated with at least one hematologist, hematologist/oncologist, or medical oncologist (primary specialty designation) in CMS Physician Compare. For practices with more than one oncologist practice location, the location with the most oncologists (and the most clinicians when tied) is displayed. Size of practice represents the number of hematologists and/or medical oncologists associated with that practice (not restricted to those practicing at the main site).

2 Geographic shapefiles were accessed from census.gov/geographies/reference-files/time-series/geo/gazetteer-files.html. Colors were determined by quintiles of the data.

Figure 8. Rural and Non-Rural Oncology Practices[1,2]

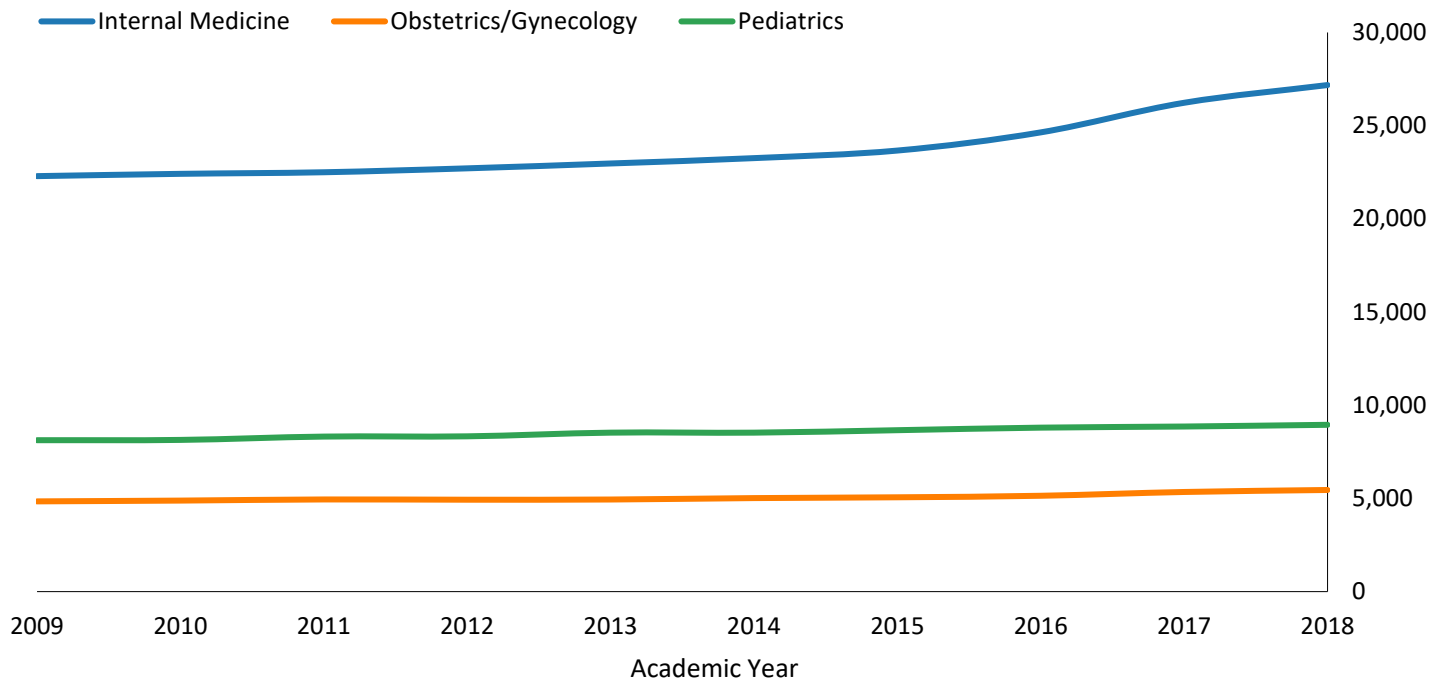


Sources: Medicare Physician Compare (April 2020 update), US Census Bureau Gazetteer Files, USDA Rural-Urban Continuum Codes

1 Points represent each of 1,698 practices in the US associated with at least one hematologist, hematologist/oncologist, or medical oncologist (primary specialty designation) in CMS Physician Compare. For practices with more than one oncologist practice location, the location with the most oncologists (and the most clinicians where tied) is displayed. Rural practices are those practices with a majority of hematologists and/or medical oncologists using a rural practice address, as classified by 2013 Rural-Urban Continuum Codes from the US Department of Agriculture, accessed from ers.usda.gov/data-products/rural-urban-continuum-codes.aspx.

2 Geographic shapefiles were accessed from census.gov/geographies/reference-files/time-series/geo/gazetteer-files.html. Colors were determined by quintiles of the data.

Figure 9. Residents in Oncology Pipeline Programs[1]

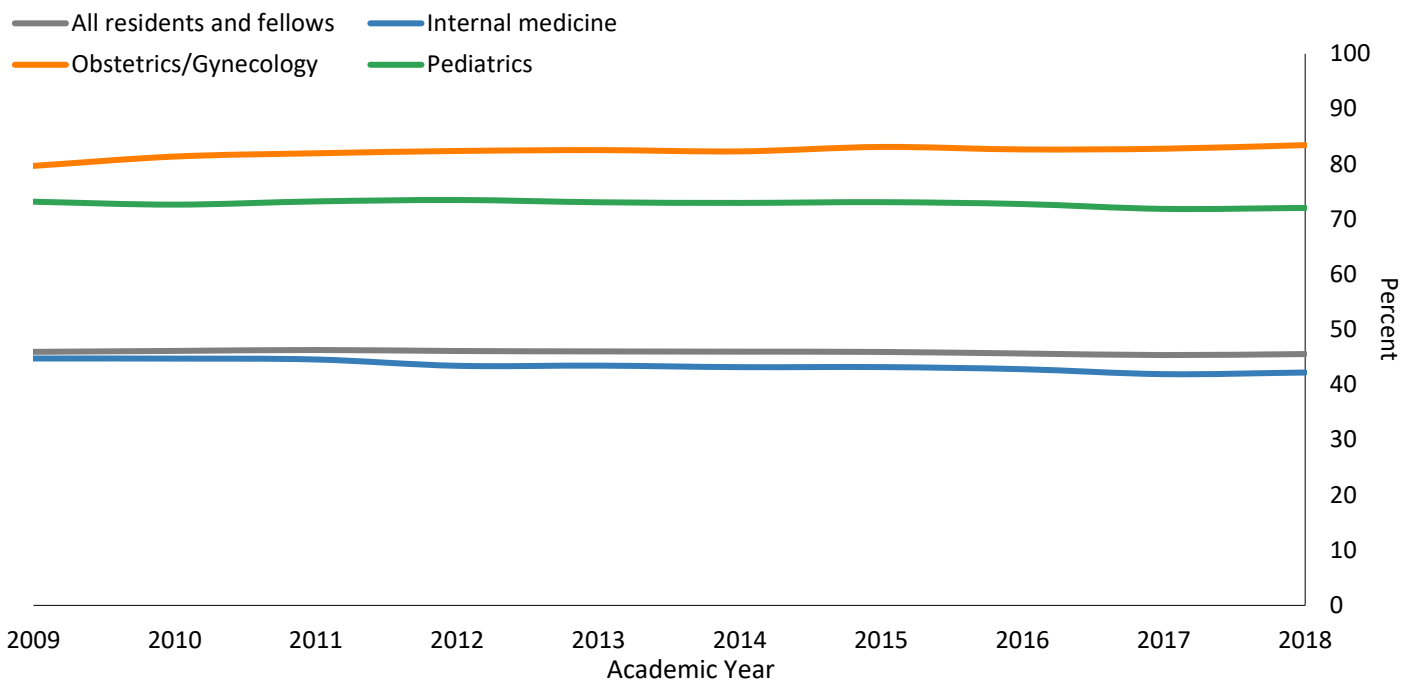


	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Internal Medicine	22,292	22,415	22,500	22,710	22,971	23,258	23,664	24,640	26,228	27,179
Obstetrics/Gynecology	4,842	4,884	4,945	4,931	4,942	5,018	5,061	5,143	5,346	5,453
Pediatrics	8,124	8,140	8,318	8,332	8,529	8,529	8,661	8,798	8,858	8,950

Source: JAMA Medical Education Issues

1 The figures here represent the total number of residents in oncology pipeline programs that are accredited by the ACGME.

Figure 10. Percentage of Residents in Oncology Pipeline Programs Who Are Female[1]

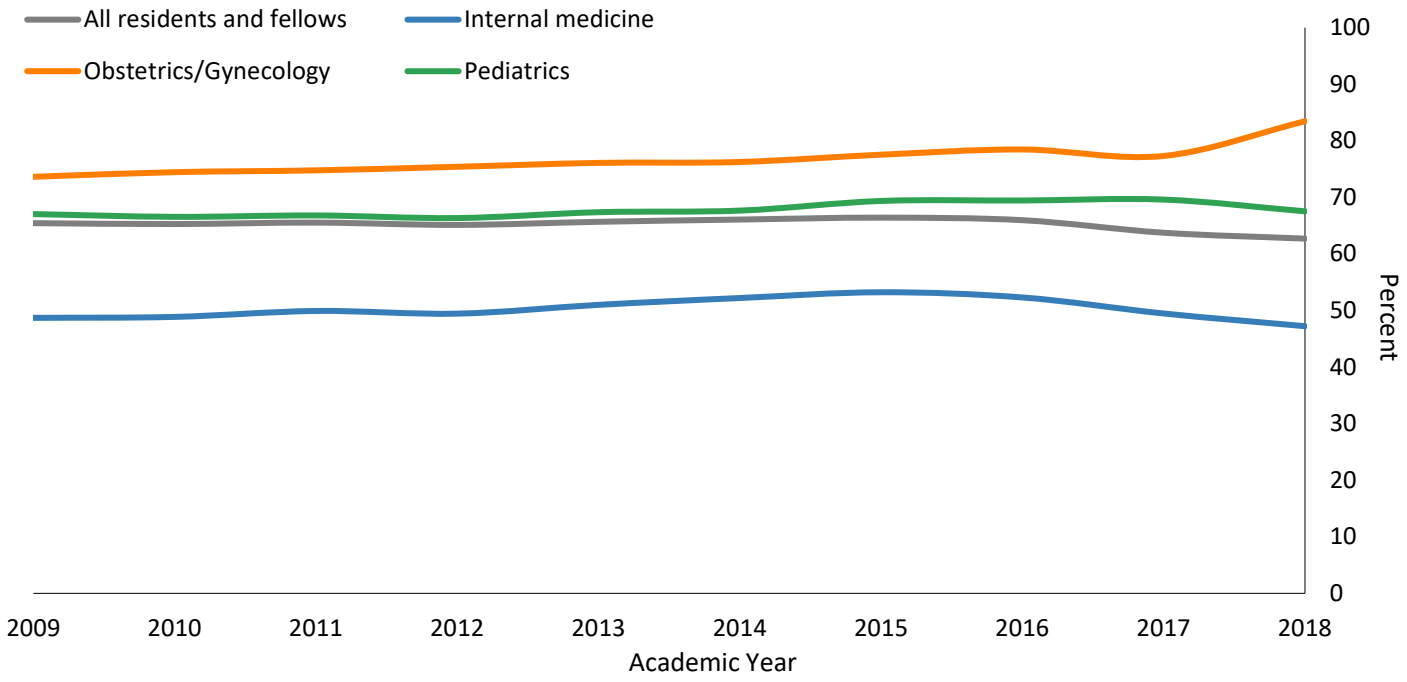


	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total number of residents and fellows	109,840	111,586	113,427	115,111	117,427	118,366	120,598	124,096	130,545	136,028
Residents and fellows who are female	50,485	51,475	52,512	53,083	54,065	54,445	55,410	56,667	59,242	61,980
Percent female	46.0	46.1	46.3	46.1	46.0	46.0	45.9	45.7	45.4	45.6
Internal medicine residents	22,292	22,415	22,500	22,710	22,971	23,258	23,664	24,640	26,228	27,179
Internal med residents who are female	9,978	10,028	10,030	9,863	9,984	10,045	10,223	10,550	10,995	11,474
Percent female	44.8	44.7	44.6	43.4	43.5	43.2	43.2	42.8	41.9	42.2
Obstetrics/Gynecology residents	4,842	4,884	4,945	4,931	4,942	5,018	5,061	5,143	5,346	5,453
Ob/Gyn residents who are female	3,858	3,974	4,053	4,062	4,079	4,130	4,206	4,251	4,426	4,550
Percent female	79.7	81.4	82.0	82.4	82.5	82.3	83.1	82.7	82.8	83.4
Pediatrics residents	8,124	8,140	8,318	8,332	8,529	8,529	8,661	8,798	8,858	8,950
Pediatrics residents who are female	5,945	5,914	6,092	6,123	6,233	6,223	6,331	6,401	6,367	6,449
Percent female	73.2	72.7	73.2	73.5	73.1	73.0	73.1	72.8	71.9	72.1

Source: JAMA Medical Education Issues

1 The percentage of residents who are female is based on the total number of residents. For example, the percentage of internal medicine residents who are female is based on the total number of internal medicine residents. The denominator may include residents whose sex is not known.

Figure 11. Percentage of Residents in Oncology Pipeline Programs Who Are USMDs[1]

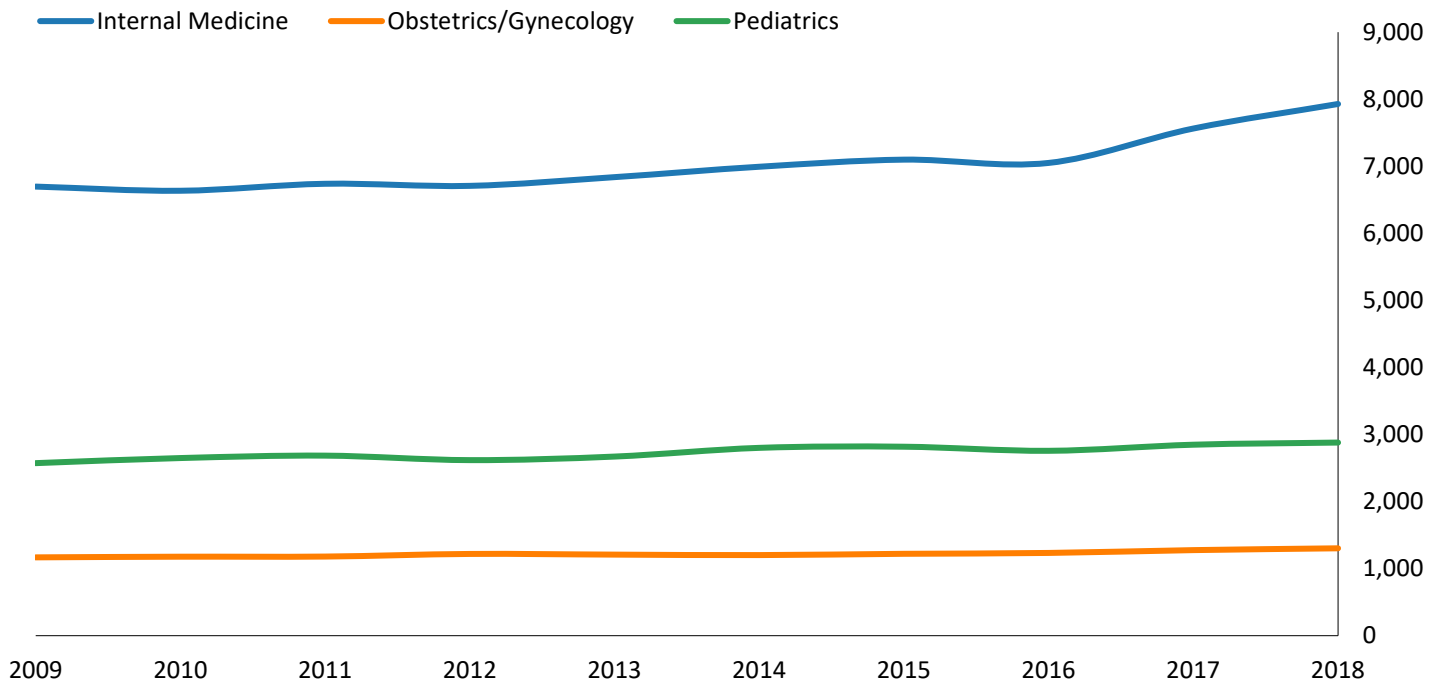


	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total number of residents and fellows	109,840	111,586	113,427	115,111	117,427	118,366	120,598	124,096	130,545	136,028
Residents and fellows who are USMDs	71,871	72,840	74,328	74,963	77,118	78,206	80,084	81,849	83,210	85,289
Percent USMDs	65.4	65.3	65.5	65.1	65.7	66.1	66.4	66.0	63.7	62.7
Internal medicine residents	22,292	22,415	22,500	22,710	22,971	23,258	23,664	24,640	26,228	27,179
Internal med residents who are USMDs	10,855	10,953	11,230	11,228	11,714	12,141	12,594	12,887	12,974	12,834
Percent USMDs	48.7	48.9	49.9	49.4	51.0	52.2	53.2	52.3	49.5	47.2
Obstetrics/Gynecology residents	4,842	4,884	4,945	4,931	4,942	5,018	5,061	5,143	5,346	5,453
Ob/Gyn residents who are USMDs	3,565	3,636	3,697	3,718	3,760	3,826	3,924	4,035	4,133	4,550
Percent USMDs	73.6	74.4	74.8	75.4	76.1	76.2	77.5	78.5	77.3	83.4
Pediatrics residents	8,124	8,140	8,318	8,332	8,529	8,529	8,661	8,798	8,858	8,950
Pediatrics residents who are USMDs	5,446	5,417	5,556	5,527	5,746	5,770	6,007	6,109	6,165	6,044
Percent USMDs	67.0	66.5	66.8	66.3	67.4	67.7	69.4	69.4	69.6	67.5

Source: JAMA Medical Education Issues

1 The percentage of residents who are USMDs is based on the total number of residents. For example, the percentage of internal medicine residents who are USMDs is based on the total number of internal medicine residents. The denominator may include residents whose medical school is not known.

Figure 12. Number of Physicians Who Completed an Oncology Pipeline Program[1]

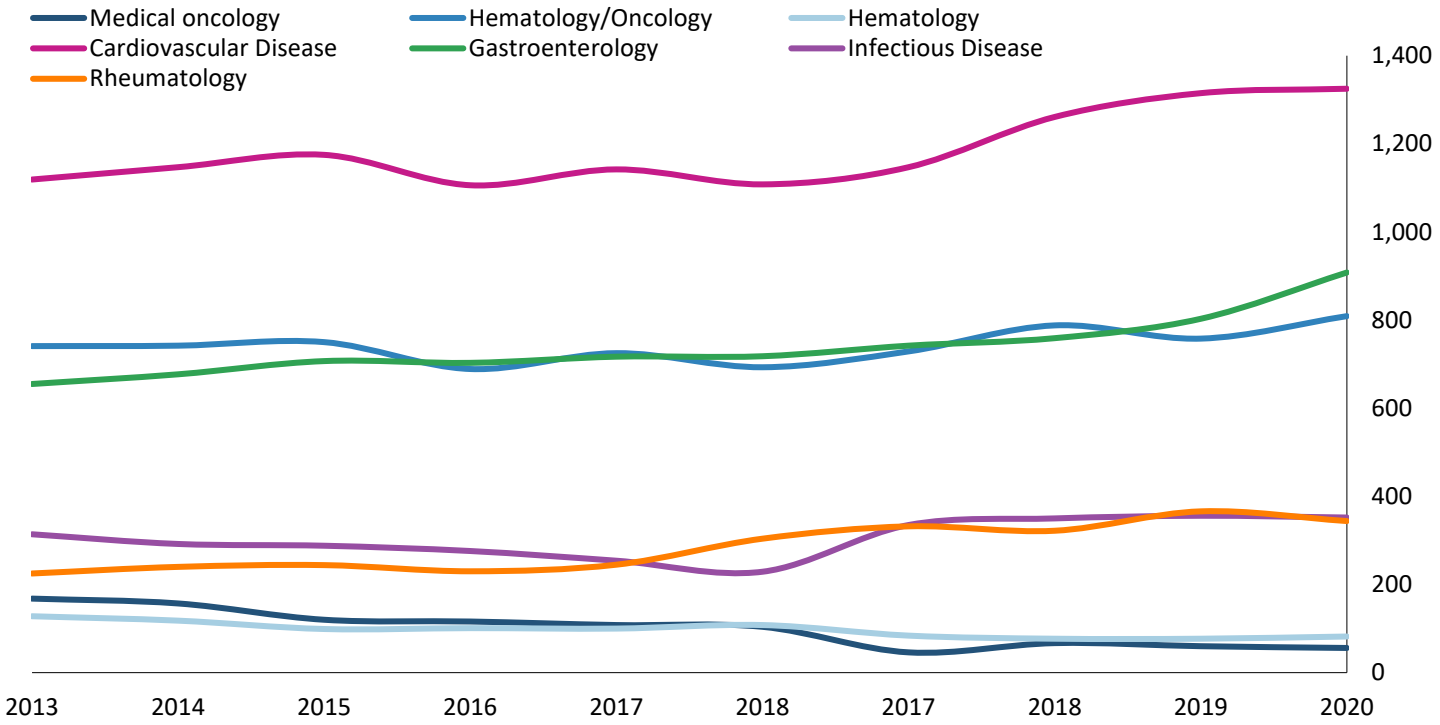


	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Internal Medicine	6,697	6,635	6,739	6,708	6,838	6,993	7,099	7,050	7,563	7,929
Obstetrics/Gynecology	1,168	1,178	1,180	1,219	1,209	1,202	1,221	1,234	1,276	1,303
Pediatrics	2,573	2,649	2,685	2,618	2,671	2,801	2,818	2,757	2,848	2,880

Source: JAMA Medical Education Issues

1 These data represent the number of residents who completed a program in a given academic year. For example, data for 2016 correspond to residents who completed the program during the 2015-2016 academic year.

Figure 13. Number of Physicians Who Applied for an Internal Medicine Subspecialty Fellowship



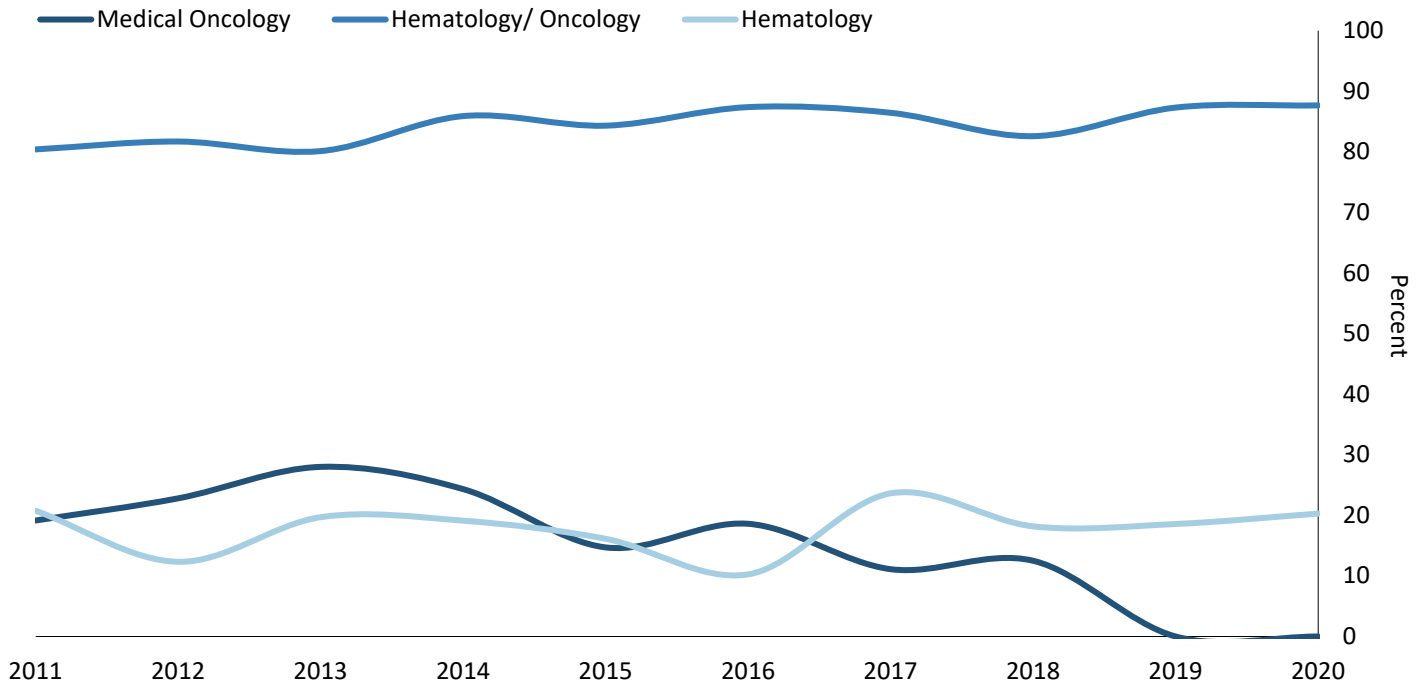
	2013	2014	2015	2016	2017	2018	2017	2018	2019	2020
Total active fellowship applicants[1]	7,774	8,249	8,653	9,297	10,032	10,337	10,873	11,277	11,996	12,512
Oncology[2]										
Medical oncology	168	157	120	116	108	104	46	67	60	56
Hematology	128	118	99	101	100	108	84	77	77	82
Hematology/Oncology	741	742	750	689	725	693	729	788	758	809
Other IM Subspecialty[2]										
Cardiovascular Disease	1,119	1,147	1,175	1,106	1,142	1,108	1,147	1,261	1,315	1,325
Gastroenterology	655	677	707	703	717	718	742	759	803	908
Infectious Disease	314	292	288	276	254	229	335	350	356	352
Pulmonary Disease	72	81	96	95	83	101	100	110	113	115
Pulm. Disease and Critical Care I	616	599	700	753	780	689	742	789	848	931
Rheumatology	225	240	244	230	245	304	332	322	366	344

Source: Results and Data: Specialties Matching Service. National Resident Matching Program. Accessed online at nrmp.org/fellowship-match-data.

1 The data here represent the number of physicians who registered for the NRMP's Specialties Matching Service (SMS) and submitted a rank order list of fellowship programs. The total number of applicants is affected by the number of programs that participate in the Match. To the extent that the number of programs participating increases, a corresponding increase in the total number of applicants might be expected. Data for 2020 represent the 2020 appointment year.

2 Please note that it is not possible to sum the number of applicants in one subspecialty to applicants in another subspecialty, as some applicants apply to more than one subspecialty. In other words, the same applicant may be counted in medical oncology and in hematology/oncology; summing those could result in double counting.

Figure 14. Percentage of USMD Fellowship Applicants Who Matched to an Oncology Fellowship[1]

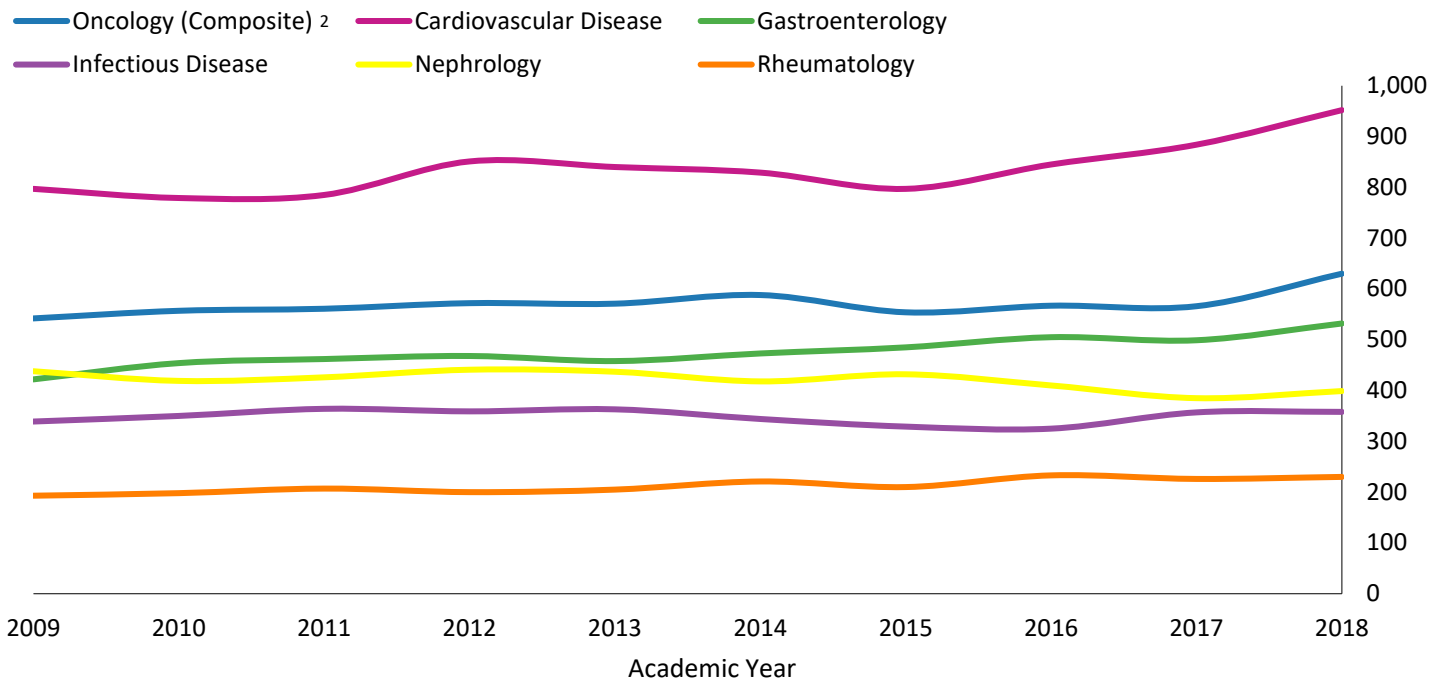


	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
USMDs who applied for a med onc fellowship	47	57	25	37	34	43	9	8	3	7
Number of USMDs who matched	9	13	7	9	5	8	1	1	0	0
Percent of USMDs who matched	19.1	22.8	28.0	24.3	14.7	18.6	11.1	12.5	0.0	0.0
USMDs who applied for a hem fellowship	53	73	66	68	62	78	55	66	70	69
Number of USMDs who matched	11	9	13	13	10	8	13	12	13	14
Percent of USMDs who matched	20.8	12.3	19.7	19.1	16.1	10.3	23.6	18.2	18.6	20.3
USMDs who applied for a hem/onc fellowship	296	317	322	305	338	325	332	402	394	381
Number of USMDs who matched	238	259	258	262	285	284	287	332	344	334
Percent of USMDs who matched	80.4	81.7	80.1	85.9	84.3	87.4	86.4	82.6	87.3	87.7

Source: Results and Data: Specialties Matching Service. National Resident Matching Program. Accessed online at nrmp.org/fellowship-match-data.

1 The figures here represent the number of USMDs who applied for a hematology, hematology/oncology, or clinical oncology fellowship in the the NRMP's Specialties Match and the percentage who matched to a hematology, hematology/oncology, or oncology program. The number of applicants is affected by the number of programs that participate in the Match. To the extent that the number of programs participating increases, a corresponding increase in the number of applicants might be expected. Data for 2020 represent the 2020 appointment year.

Figure 15. Number of First Year Fellows in Internal Medicine Subspecialties[1]



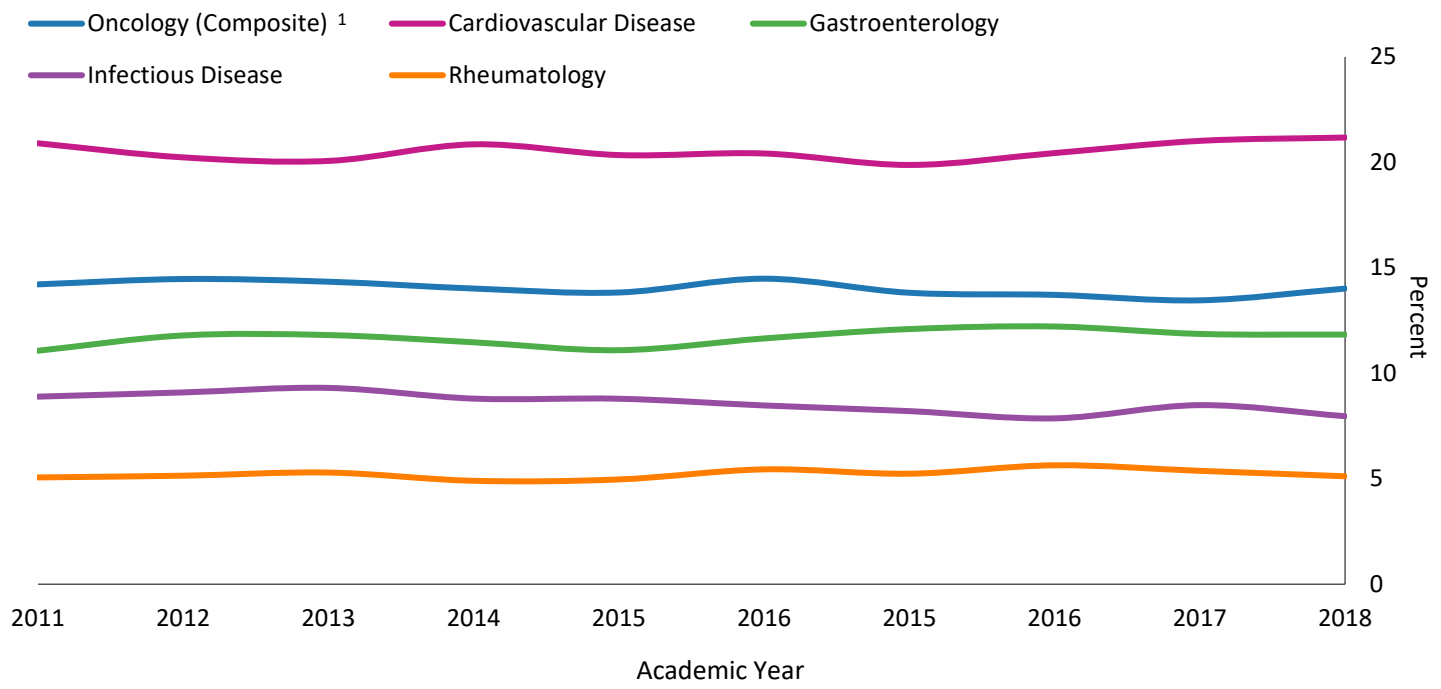
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Oncology (Composite)[2]	542	557	561	572	571	588	554	567	566	630
Hematology	20	20	19	10	13	12	15	10	7	10
Hematology/Oncology	473	497	501	516	520	547	509	540	541	596
Medical Oncology	49	40	41	46	38	29	30	17	18	24
Other IM Subspecialty										
Cardiovascular Disease	797	779	785	851	840	829	797	845	884	952
Gastroenterology	422	454	462	468	458	473	485	505	499	532
Infectious Disease	339	350	364	359	363	344	329	325	357	358
Nephrology	438	419	426	441	437	418	432	410	385	399
Pulm. Disease and Critical Care Med.	434	449	473	490	511	496	553	544	566	672
Rheumatology	193	198	207	200	205	221	210	233	226	230

Source: JAMA Medical Education Issues

1 The data here represent the number of fellows in PY1 positions in internal medicine subspecialty programs accredited by the ACGME.

2 The data represent the total number of fellows (MDs and DOs) in hematology, hematology/oncology, and clinical oncology GME programs accredited by the ACGME.

Figure 16. Percentage of First Year IM Subspecialty Fellows by Subspecialty

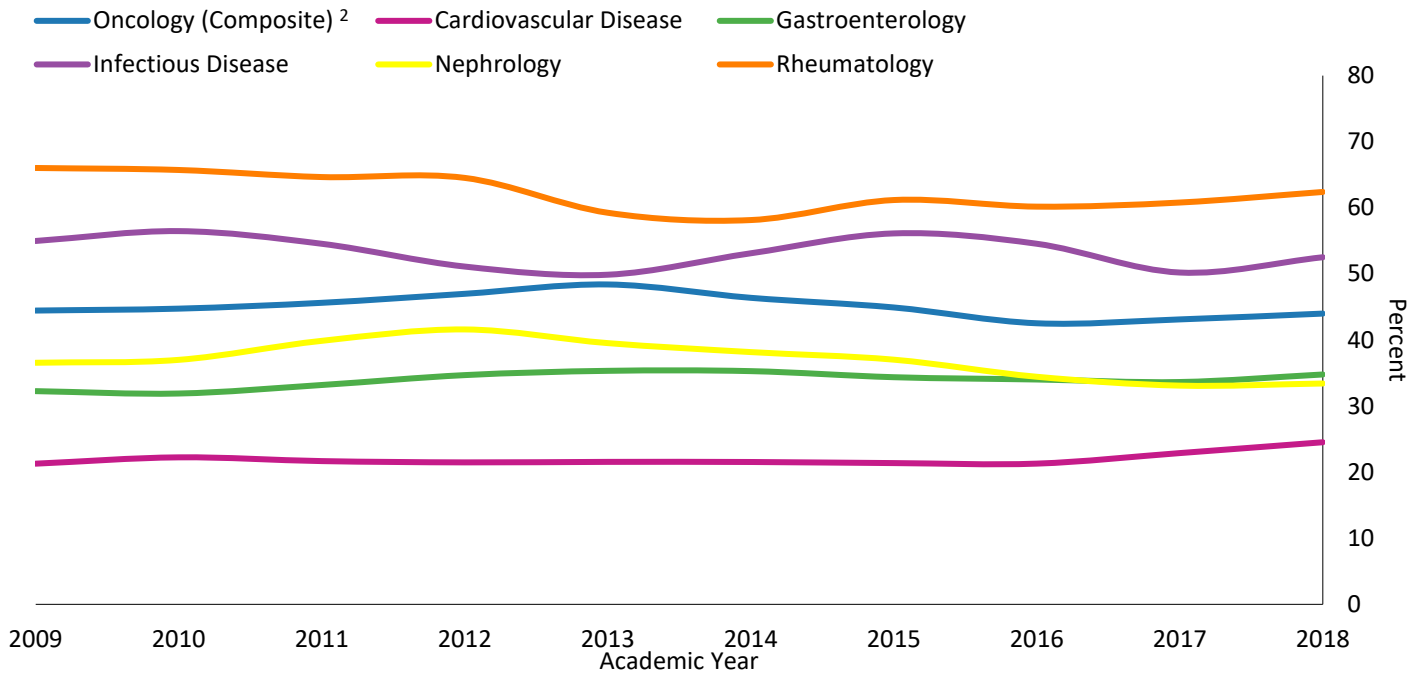


	2011	2012	2013	2014	2015	2016	2015	2016	2017	2018
Oncology (Composite)[1]	14.2	14.5	14.3	14.0	13.8	14.5	13.8	13.7	13.5	14.0
Medical oncology	1.3	1.0	1.0	1.1	0.9	0.7	0.7	0.4	0.4	0.5
Hematology	0.5	0.5	0.5	0.2	0.3	0.3	0.4	0.2	0.2	0.2
Hematology/Oncology	12.4	12.9	12.8	12.6	12.6	13.5	12.7	13.1	12.9	13.3
Other IM Subspecialty										
Cardiovascular Disease	20.9	20.2	20.1	20.9	20.3	20.4	19.9	20.4	21.0	21.2
Gastroenterology	11.1	11.8	11.8	11.5	11.1	11.7	12.1	12.2	11.9	11.8
Infectious Disease	8.9	9.1	9.3	8.8	8.8	8.5	8.2	7.9	8.5	8.0
Pulm. Disease and Critical Care Med.	11.4	11.7	12.1	12.0	12.4	12.2	13.8	13.2	13.5	14.9
Rheumatology	5.1	5.1	5.3	4.9	5.0	5.4	5.2	5.6	5.4	5.1

Source: JAMA Medical Education Issues

1 The data represent the total number of fellows (MDs and DOs) in hematology, hematology/oncology, and clinical oncology GME programs accredited by the ACGME.

Figure 17. Percentage of Fellows in Internal Medicine Subspecialties Who Are Female



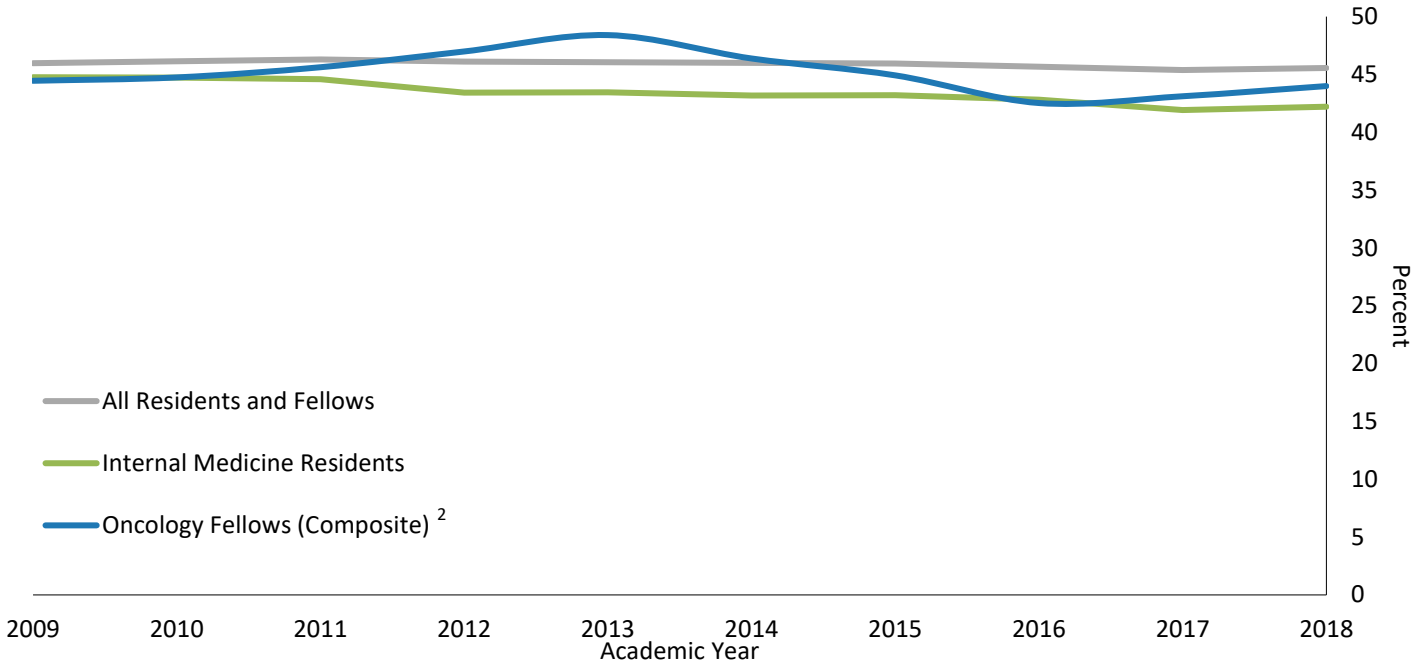
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
All residents and fellows[1]	46.0	46.1	46.3	46.1	46.0	46.0	45.9	45.7	45.4	45.6
Internal medicine	44.8	44.7	44.6	43.4	43.5	43.2	43.2	42.8	41.9	42.2
Oncology (Composite)[2]	44.5	44.7	45.6	47.0	48.4	46.4	44.9	42.5	43.1	44.0
Hematology	49.0	34.9	42.2	38.1	47.1	51.4	48.4	33.3	43.8	59.1
Hematology/Oncology	44.5	45.4	45.9	47.2	48.5	46.8	45.2	42.9	43.3	43.8
Medical Oncology	42.2	39.2	43.3	48.0	46.6	35.6	38.8	34.5	34.2	42.9
Other IM Subspecialty										
Cardiovascular Disease	21.3	22.2	21.7	21.5	21.6	21.5	21.4	21.3	22.9	24.5
Endocrinology, Diabetes, Metabolism	66.0	66.9	68.2	67.9	67.9	72.9	73.1	71.3	69.8	71.5
Gastroenterology	32.3	31.9	33.2	34.7	35.3	35.3	34.4	34.0	33.6	34.8
Infectious Disease	55.0	56.5	54.6	51.1	49.9	53.1	56.1	54.6	50.2	52.5
Nephrology	36.6	37.0	39.9	41.6	39.5	38.2	37.0	34.4	33.1	33.4
Pulm Dis and Crit Care Med	2.8	2.8	3.2	2.6	1.7	1.8	2.3	2.7	2.3	1.6
Rheumatology	66.0	65.7	64.7	64.5	59.3	58.1	61.2	60.2	60.8	62.4

Source: JAMA Medical Education Issues

1 The percentages are based on the number of fellows for whom sex is known.

2 The data represent the total number of fellows (MDs and DOs) in hematology, hematology/oncology, and clinical oncology GME programs accredited by the ACGME.

Figure 18. Percentage of Trainees Who Are Female



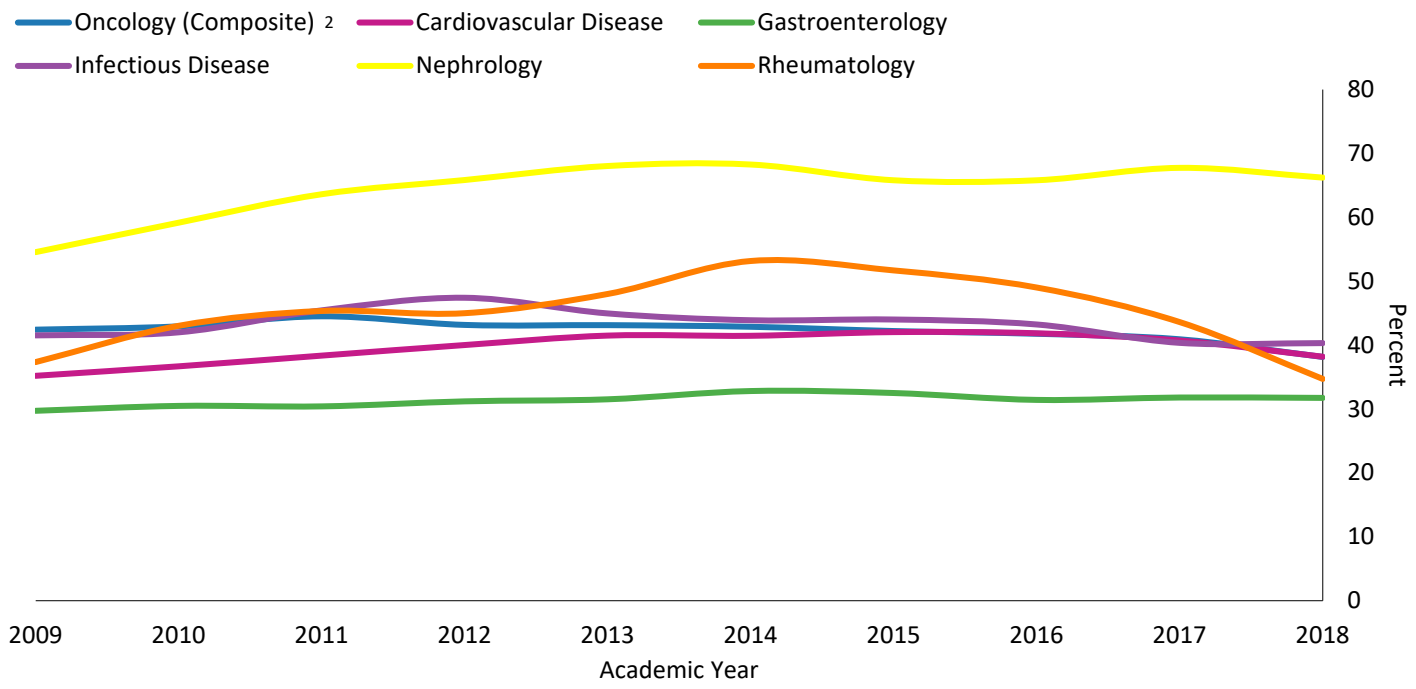
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
All residents and fellows[1]	46.0	46.1	46.3	46.1	46.0	46.0	45.9	45.7	45.4	45.6
Internal medicine	44.8	44.7	44.6	43.4	43.5	43.2	43.2	42.8	41.9	42.2
Oncology (Composite)[2]	44.5	44.7	45.6	47.0	48.4	46.4	44.9	42.5	43.1	44.0
Hematology	49.0	34.9	42.2	38.1	47.1	51.4	48.4	33.3	43.8	59.1
Hematology/Oncology	44.5	45.4	45.9	47.2	48.5	46.8	45.2	42.9	43.3	43.8
Medical Oncology	42.2	39.2	43.3	48.0	46.6	35.6	38.8	34.5	34.2	42.9

Source: JAMA Medical Education Issues

1 The percentages are based on the number of fellows for whom sex is known.

2 The data represent the total number of fellows (MDs and DOs) in hematology, hematology/oncology, and clinical oncology GME programs accredited by the ACGME.

Figure 19. Percentage of Fellows in Internal Medicine Subspecialties Who Are IMGs



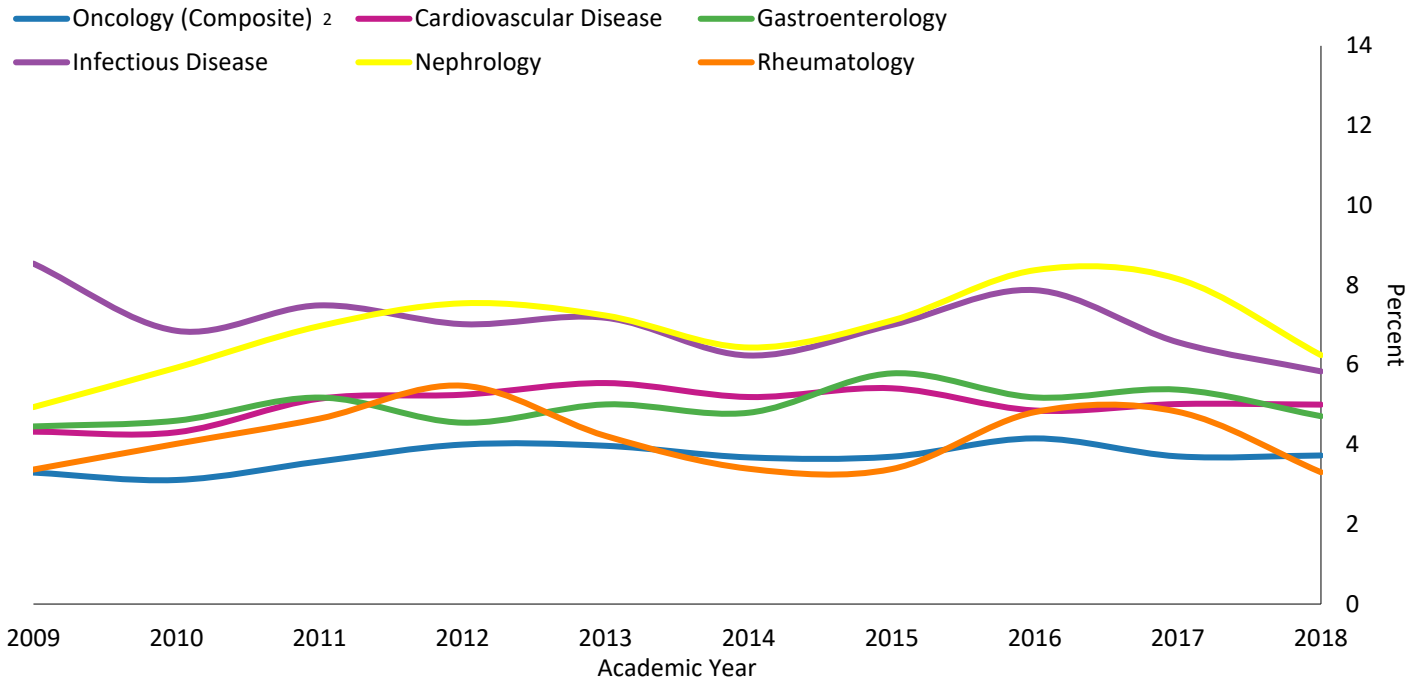
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
All residents and fellows[1]	27.4	27.3	26.7	26.7	25.9	25.3	24.6	23.9	23.5	23.0
Internal medicine	45.2	44.6	43.3	43.2	41.4	40.3	39.2	38.4	37.9	38.3
Oncology (Composite)[2]	42.4	42.9	44.5	43.2	43.1	42.9	42.2	41.8	40.9	38.2
Hematology	30.6	41.9	37.8	26.2	26.5	17.1	32.3	23.8	37.5	18.2
Hematology/Oncology	42.0	42.4	44.0	42.5	42.3	42.7	41.9	42.1	41.0	38.1
Medical Oncology	52.6	51.0	55.7	60.8	63.6	58.9	51.3	40.0	36.8	50.0
Select Other IM Subspecialty										
Cardiovascular Disease	35.2	36.7	38.4	40.0	41.5	41.5	42.0	41.9	40.7	38.2
Endocrinology, Diabetes, Metabolism	42.3	47.1	48.4	50.6	53.9	56.6	53.0	49.9	51.4	53.0
Gastroenterology	29.7	30.5	30.4	31.2	31.5	32.8	32.5	31.4	31.8	31.7
Infectious Disease	41.5	42.0	45.4	47.4	45.0	43.9	44.0	43.2	40.4	40.3
Interventional Cardiovascular Disease	47.9	41.4	48.4	47.0	45.8	47.7	51.6	52.4	51.7	45.7
Nephrology	54.6	59.2	63.6	65.8	68.0	68.3	65.8	65.8	67.7	66.2
Pulm Dis and Crit Care Med	45.2	45.6	46.8	47.5	47.6	44.4	44.0	43.2	42.0	40.9
Rheumatology	37.3	43.0	45.3	45.0	48.0	53.2	51.7	49.0	43.6	34.7

Source: JAMA Medical Education Issues

1 The percentages are based on fellows whose medical school is known. Physicians who graduated from medical schools in the U.S. territories or Canada are not considered IMGs.

2 The data represent the total number of fellows (MDs and DOs) in hematology, hematology/oncology, and clinical oncology GME programs accredited by the ACGME.

Figure 20a. Percentage of Fellows in IM Subspecialties Who Are Black or African American



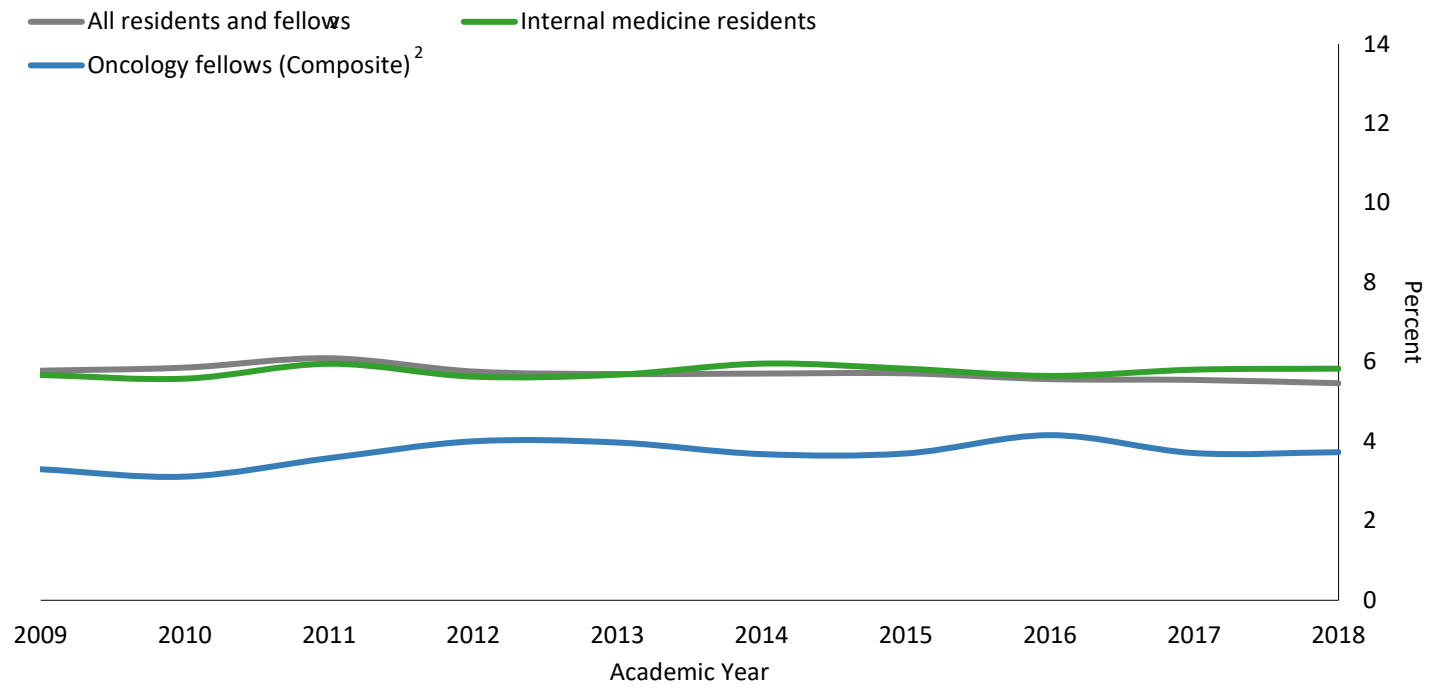
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
All residents and fellows[1]	5.8	5.9	6.1	5.8	5.7	5.7	5.7	5.6	5.5	5.5
Internal Medicine residents	5.7	5.6	6.0	5.6	5.7	6.0	5.8	5.6	5.8	5.8
Oncology (Composite)[2]	3.3	3.1	3.6	4.0	4.0	3.7	3.7	4.2	3.7	3.7
Hematology	4.1	4.7	4.4	7.1	2.9	0.0	0.0	0.0	0.0	0.0
Hematology/Oncology	3.4	3.2	3.8	4.0	4.1	3.8	3.9	4.3	3.8	3.8
Medical Oncology	1.7	1.0	0.0	2.9	2.3	2.7	1.3	1.8	0.0	2.4
Other IM Subspecialty										
Cardiovascular Disease	4.3	4.3	5.2	5.3	5.5	5.2	5.4	4.9	5.0	5.0
Endocrinology, Diabetes, Metabolism	4.6	4.8	5.8	3.9	2.7	4.5	4.6	4.6	5.1	3.8
Gastroenterology	4.5	4.6	5.2	4.5	5.0	4.8	5.8	5.2	5.4	4.7
Infectious Disease	8.5	6.9	7.5	7.0	7.2	6.2	7.0	7.9	6.6	5.8
Nephrology	4.9	5.9	7.0	7.5	7.2	6.4	7.1	8.4	8.2	6.2
Pulm Dis and Crit Care Med	3.0	3.0	3.0	3.6	3.9	4.3	4.1	4.5	4.1	3.6
Rheumatology	3.4	4.0	4.7	5.5	4.2	3.4	3.4	4.8	4.8	3.3

Source: JAMA Medical Education Issues

1 These figures represent the percentage of residents and fellows who are Black or African American. This includes people who are non-Hispanic and Black, as well as those who are Hispanic and Black. In 2014, the National GME Census imported self-designated race/ethnicity from Association of American Medical Colleges databases where available and thus introduced a "multiracial" category. Individuals citing more than one race are not included herein.

2 The data represent the total number of fellows (MDs and DOs) in hematology, hematology/oncology, and clinical oncology GME programs accredited by the ACGME.

Figure 20b. Percentage of Residents/Fellows Who Are Black or African American



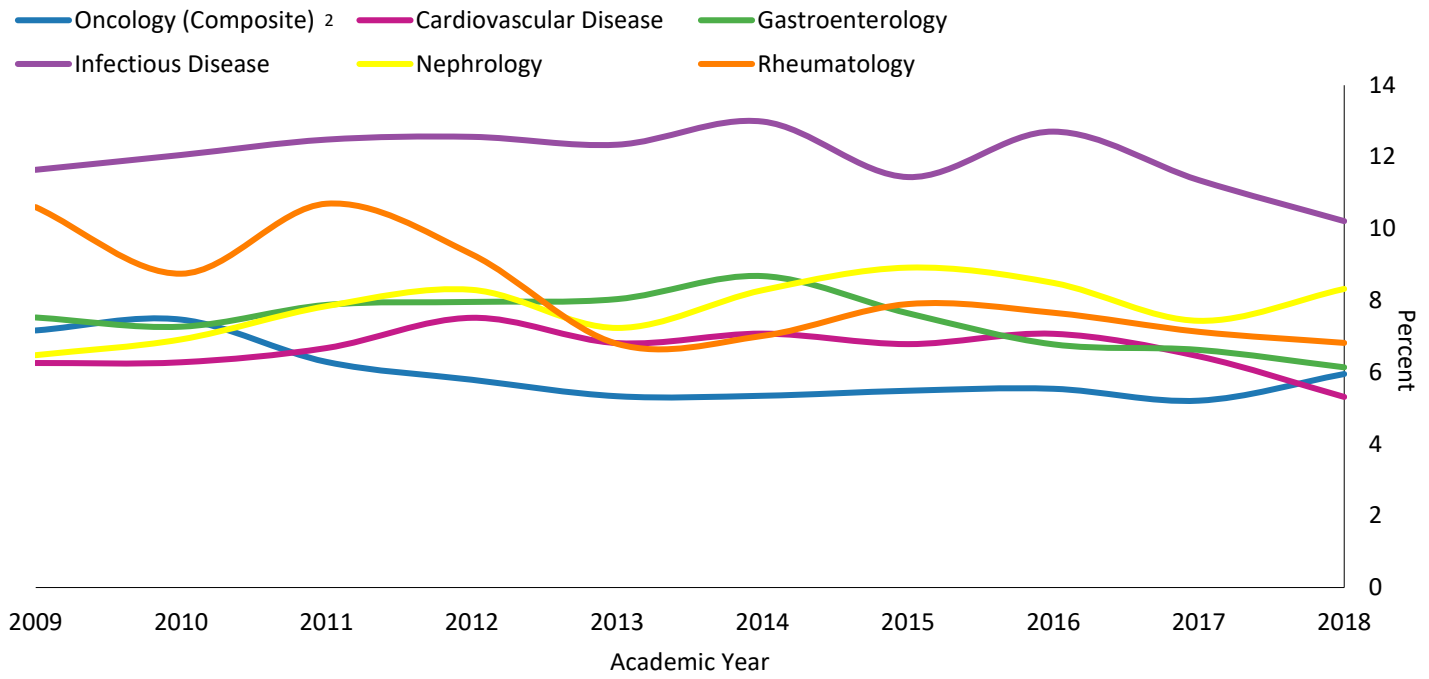
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total residents and fellows	109,840	111,586	113,427	115,111	117,427	118,366	120,598	124,096	130,545	136,028
Residents and fellows who are Black[1]	6,345	6,533	6,908	6,626	6,685	6,752	6,887	6,905	7,239	7,430
Percent Black	5.8	5.9	6.1	5.8	5.7	5.7	5.7	5.6	5.5	5.5
Internal Medicine residents	22,292	22,415	22,500	22,710	22,971	23,258	23,664	24,640	26,228	27,179
IM residents who are Black	1,264	1,250	1,339	1,278	1,304	1,385	1,379	1,391	1,522	1,584
Percent Black	5.7	5.6	6.0	5.6	5.7	6.0	5.8	5.6	5.8	5.8
Oncology fellows (Composite)[2]	1,577	1,607	1,622	1,675	1,688	1,740	1,732	1,733	1,728	1,798
Oncology fellows who are Black	52	50	58	67	67	64	64	72	64	67
Percent Black	3.3	3.1	3.6	4.0	4.0	3.7	3.7	4.2	3.7	3.7
Hematology fellows	49	43	45	42	34	35	31	21	16	22
Hematology fellows who are Black	2	2	2	3	1	0	0	0	0	0
Percent Black	4.1	4.7	4.4	7.1	2.9	0.0	0.0	0.0	0.0	0.0
Hematology/Oncology fellows	1,412	1,462	1,480	1,531	1,566	1,632	1,621	1,657	1,674	1,734
Hem/Onc fellows who are Black	48	47	56	61	64	62	63	71	64	66
Percent Black	3.4	3.2	3.8	4.0	4.1	3.8	3.9	4.3	3.8	3.8
Medical Oncology fellows	116	102	97	102	88	73	80	55	38	42
Medical Onc. fellows who are Black	2	1	0	3	2	2	1	1	0	1
Percent Black	1.7	1.0	0.0	2.9	2.3	2.7	1.3	1.8	0.0	2.4

Source: JAMA Medical Education Issues

1 These figures represent the percentage of residents and fellows who are Black or African American. This includes people who are non-Hispanic and Black, as well as those who are Hispanic and Black. In 2014, the National GME Census imported self-designated race/ethnicity from Association of American Medical Colleges databases where available and thus introduced a "multiracial" category. Individuals citing more than one race are not included herein.

2 The data represent the total number of fellows (MDs and DOs) in hematology, hematology/oncology, and clinical oncology GME programs accredited by the ACGME.

Figure 21a. Percentage of Fellows in Internal Medicine Subspecialties Who Are Hispanic or Latino



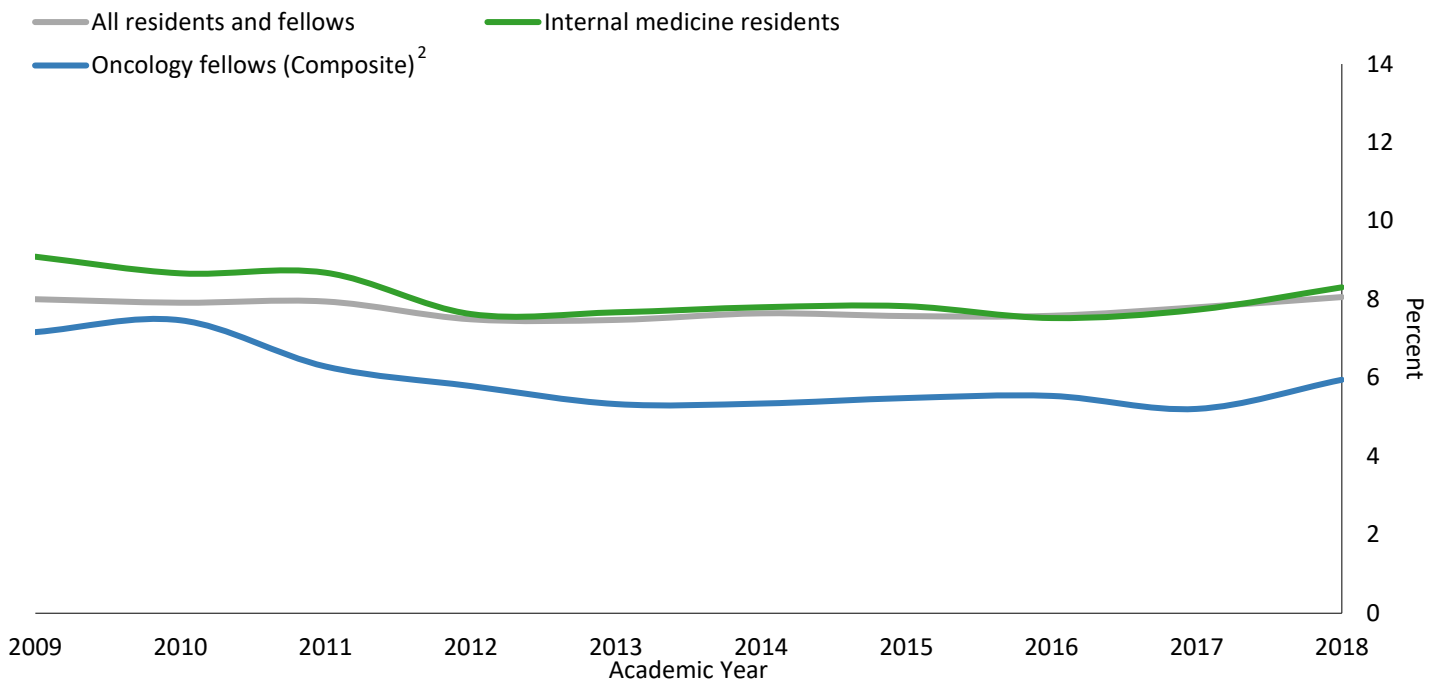
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
All residents and fellows[1]	8.0	7.9	7.9	7.5	7.5	7.6	7.6	7.6	7.8	8.1
Internal Medicine residents	9.1	8.7	8.7	7.6	7.7	7.8	7.8	7.5	7.7	8.3
Oncology (Composite)[2]	7.2	7.5	6.3	5.8	5.3	5.3	5.5	5.5	5.2	6.0
Hematology	12.2	4.7	2.2	7.1	5.9	5.7	0.0	0.0	0.0	4.5
Hematology/Oncology	6.8	7.5	6.4	5.7	5.0	5.3	5.6	5.7	5.4	6.1
Medical Oncology	9.5	7.8	7.2	5.9	10.2	6.8	5.0	3.6	0.0	0.0
Other IM Subspecialty										
Cardiovascular Disease	6.3	6.3	6.7	7.5	6.8	7.1	6.8	7.1	6.4	5.3
Endocrinology, Diabetes, Metabolism	9.4	10.4	10.5	8.2	11.3	13.5	11.7	11.1	11.9	13.1
Gastroenterology	7.5	7.3	7.9	8.0	8.0	8.7	7.6	6.8	6.6	6.1
Infectious Disease	11.6	12.1	12.5	12.6	12.3	13.0	11.4	12.7	11.4	10.2
Nephrology	6.5	6.9	7.8	8.3	7.2	8.3	8.9	8.5	7.4	8.3
Pulm Dis and Crit Care Med	10.6	10.2	10.4	9.4	8.9	8.2	6.4	6.2	6.0	6.6
Rheumatology	10.6	8.7	10.7	9.3	6.8	7.0	7.9	7.7	7.1	6.8

Source: JAMA Medical Education Issues

1 These figures represent the proportion of residents and fellows in ACMGE-accredited programs who are Hispanic or Latino. People who are Hispanic or Latino can be of any race.

2 The data represent the total number of fellows (MDs and DOs) in hematology, hematology/oncology, and clinical oncology GME programs accredited by the ACGME.

Figure 21b. Percentage of Residents and Fellows Who Are Hispanic or Latino



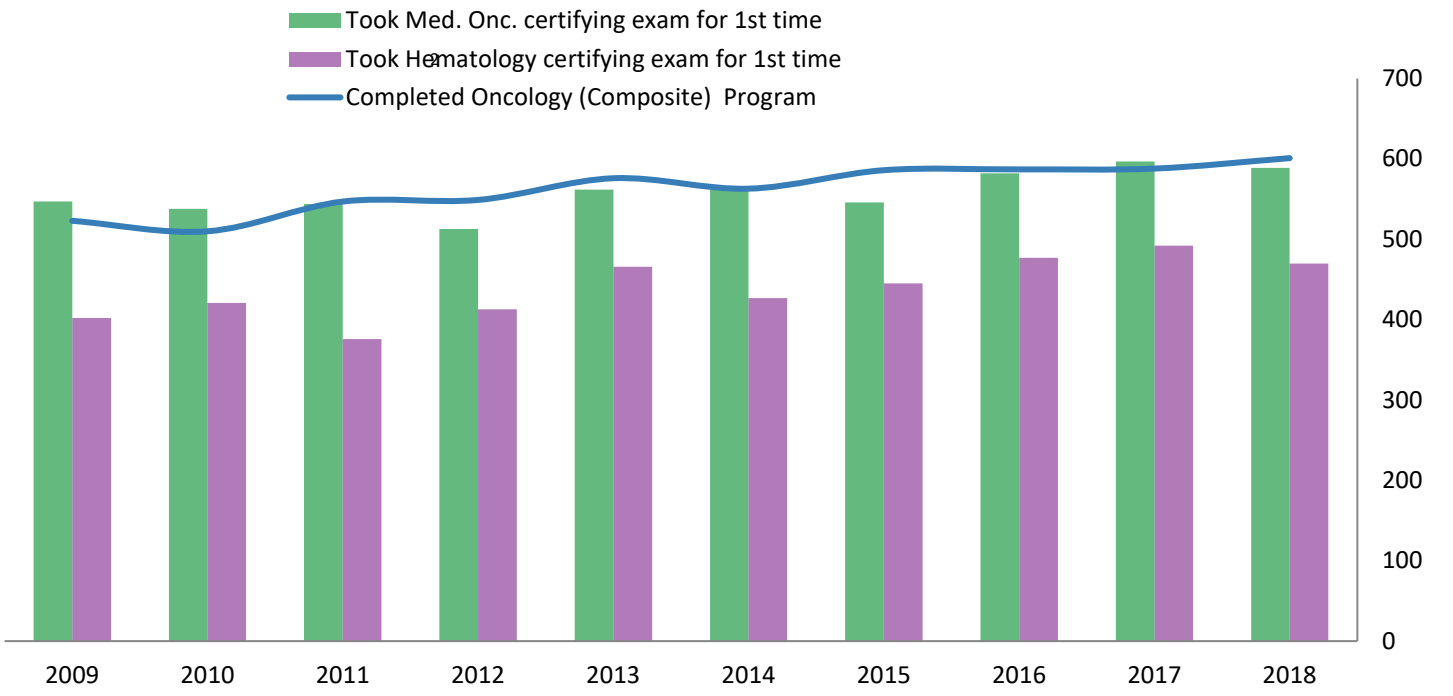
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total residents and fellows	109,840	111,586	113,427	115,111	117,427	118,366	120,598	124,096	130,545	136,028
Residents and fellows who are Hispanic[1]	8,792	8,832	9,013	8,625	8,780	9,048	9,135	9,409	10,180	10,963
Percent Hispanic	8.0	7.9	7.9	7.5	7.5	7.6	7.6	7.6	7.8	8.1
Internal Medicine residents	22,292	22,415	22,500	22,710	22,971	23,258	23,664	24,640	26,228	27,179
IM residents who are Hispanic	2,026	1,942	1,953	1,732	1,762	1,814	1,852	1,854	2,029	2,258
Percent Hispanic	9.1	8.7	8.7	7.6	7.7	7.8	7.8	7.5	7.7	8.3
Oncology fellows (Composite)[2]	1,577	1,607	1,622	1,675	1,688	1,740	1,732	1,733	1,728	1,798
Oncology fellows who are Hispanic	113	120	102	97	90	93	95	96	90	107
Percent Hispanic	7.2	7.5	6.3	5.8	5.3	5.3	5.5	5.5	5.2	6.0
Hematology fellows	49	43	45	42	34	35	31	21	16	22
Hematology fellows who are Hispanic	6	2	1	3	2	2	0	0	0	1
Percent Hispanic	12.2	4.7	2.2	7.1	5.9	5.7	0.0	0.0	0.0	4.5
Hematology/Oncology fellows	1,412	1,462	1,480	1,531	1,566	1,632	1,621	1,657	1,674	1,734
Hem/Onc fellows who are Hispanic	96	110	94	88	79	86	91	94	90	106
Percent Hispanic	6.8	7.5	6.4	5.7	5.0	5.3	5.6	5.7	5.4	6.1
Medical Oncology fellows	116	102	97	102	88	73	80	55	38	42
Medical Onc. fellows who are Hispani	11	8	7	6	9	5	4	2	0	0
Percent Hispanic	9.5	7.8	7.2	5.9	10.2	6.8	5.0	3.6	0.0	0.0

Source: JAMA Medical Education Issues

1 These figures represent the proportion of residents and fellows in ACMGE-accredited programs who are Hispanic or Latino. People who are Hispanic or Latino can be of any race.

2 The data represent the total number of fellows (MDs and DOs) in hematology, hematology/oncology, and clinical oncology GME programs accredited by the ACGME.

Figure 22. New Entrants to the Oncology Workforce (Fellows Completing GME and Board Exam Test Takers

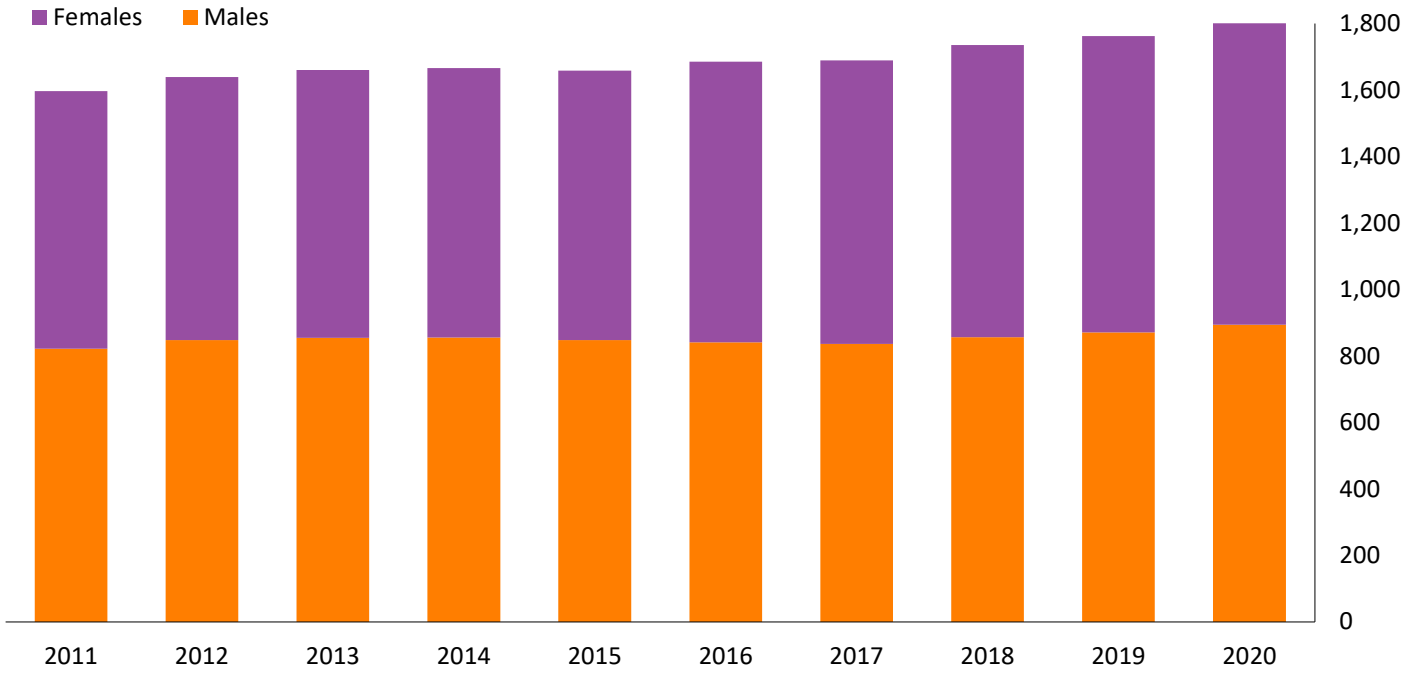


	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Fellows who completed an oncology pro	523	510	547	549	576	563	586	587	588	601
Hematology	21	13	9	13	10	13	18	5	7	9
Hematology/Oncology	453	456	497	480	529	516	539	562	550	572
Medical Oncology	49	41	41	56	37	34	29	20	31	20
Physicians who took certifying exam for first time[2]										
Hematology	402	421	376	413	466	427	445	477	492	470
Medical Oncology	547	538	544	513	562	562	546	582	597	589

1 The number of fellows completing a hematology, hematology/oncology, or oncology program were obtained from the ACGME website, accessed from acgme.org/acgmeweb/tabid/259/Publications/GraduateMedicalEducationDataResourceBook.aspx. The year corresponds to the year of graduation. For example, fellows graduating after the 2015-2016 Academic Year are represented in 2016.

2 The number of first time test-takers in Hematology and Medical Oncology were obtained from the American Board of Internal Medicine website, available at abim.org/about/examInfo/data-pass-rates.aspx.

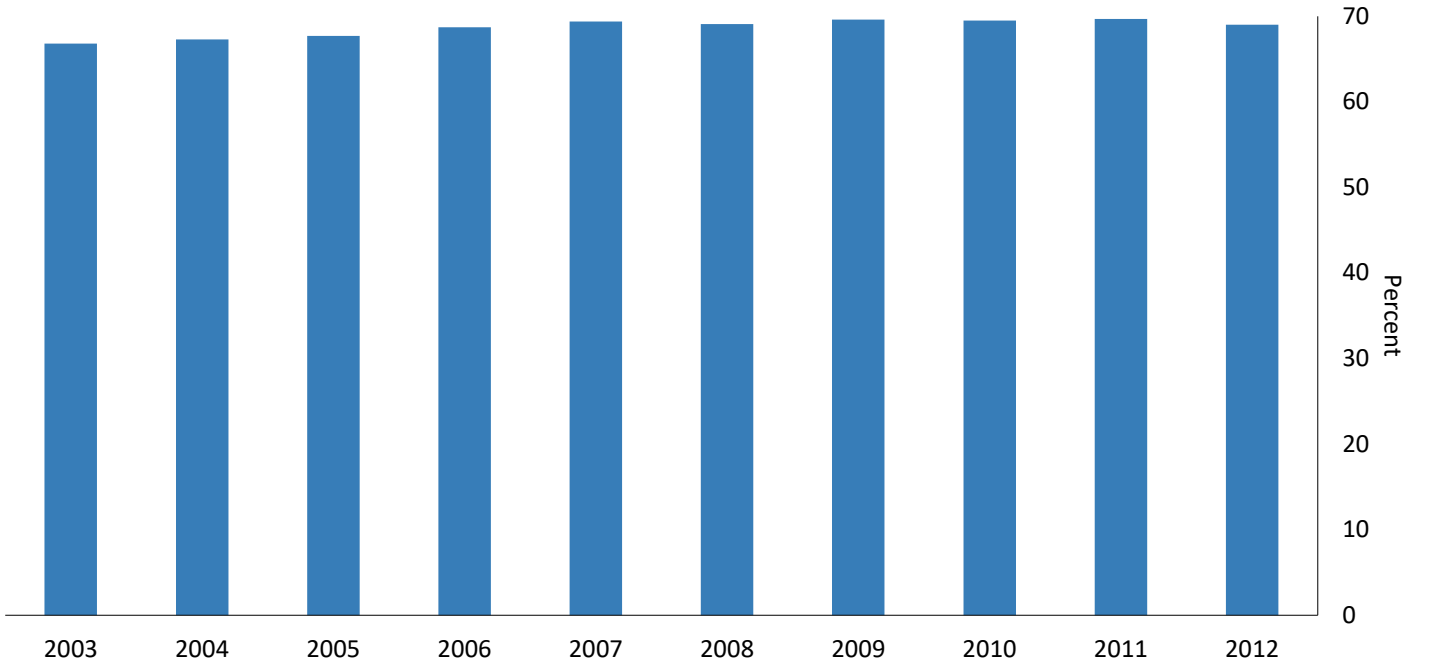
Figure 23. Estimated Number of New Cancer Cases (in 1000s) by Sex[1]



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Estimated new cancer cases - Males	822	848	855	855	848	841	836	856	871	894
Estimated new cancer cases - Femal	774	791	806	810	810	844	853	879	891	913

1 The estimated number of new cases comes from the American Cancer Society. Cancer Facts and Figures. Accessed online at cancer.org/research/cancer-facts-statistics/all-cancer-facts-figures.html. The number of estimated new cancer cases exclude basal and squamous cell skin cancers and in situ carcinomas except urinary bladder. Estimated new cases are rounded to the nearest 10th and are based on incidences rates from 41 states and the District of Columbia as reported by the North American Association of Central Cancer Registries, representing about 85% of the US population.

Figure 24. Five-Year Relative Cancer Survival Rates by Year of Diagnosis

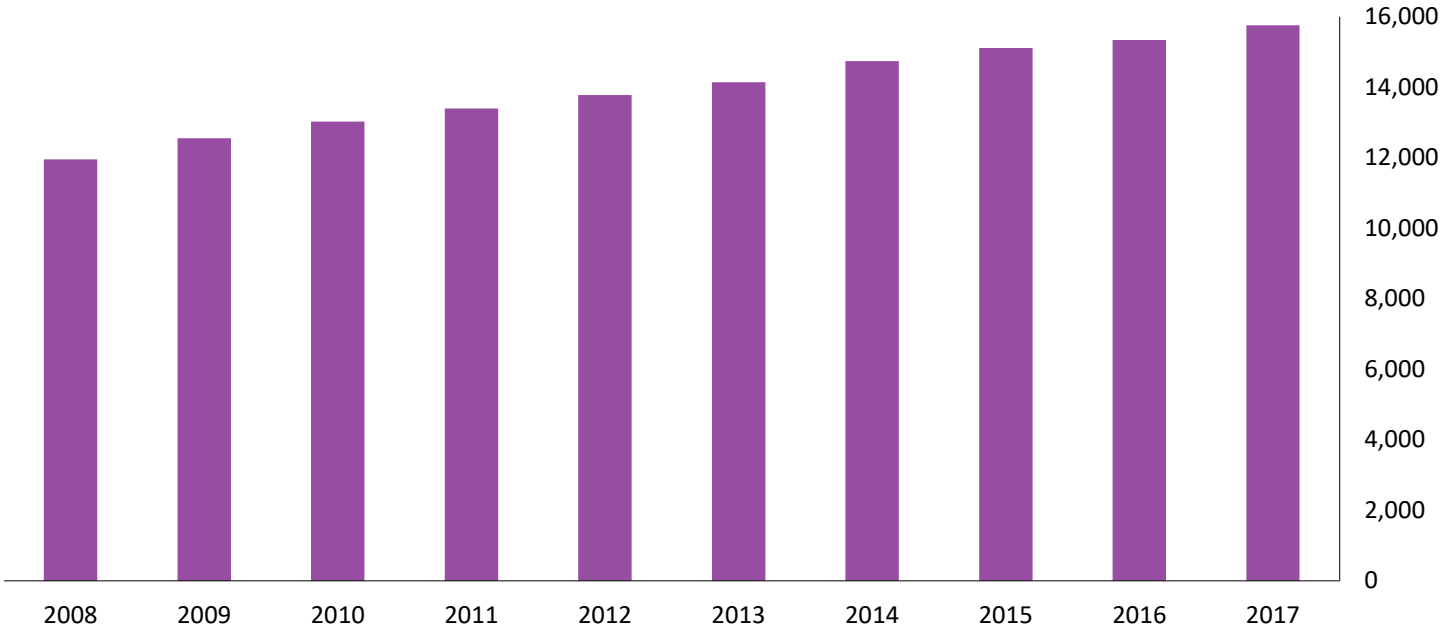


	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
5-year relative survival rate by year of diagnosis[1]	66.8	67.3	67.7	68.7	69.4	69.1	69.6	69.5	69.7	69.0

Source: Howlader N, Noone AM, Krapcho M, Miller D, Brest A, Yu M, Ruhl J, Tatalovich Z, Mariotto A, Lewis DR, Chen HS, Feuer EJ, Cronin KA (eds). SEER Cancer Statistics Review, 1975-2017, National Cancer Institute. Bethesda, MD, https://seer.cancer.gov/csr/1975_2017/, based on November 2019 SEER data submission, posted to the SEER web site, April 2020.

1 The five-year cancer survival rates represent the proportion of patients surviving cancer 5 years after diagnosis, adjusted to remove all causes of death except cancer. These rates are from the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta).

Figure 25. Number of People With a History of Cancer (in 1000s)



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
People with a history of cancer (in 1000s	11,958	12,553	13,028	13,397	13,776	14,140	14,739	15,113	15,339	15,761
Cancer survivors, 5-year limited duration	4,250	4,357	4,511	4,595	4,660	4,684	5,327	5,364	4,618	4,695

Source: Noone AM, Howlader N, Krapcho M, Miller D, Brest A, Yu M, Ruhl J, Tatalovich Z, Mariotto A, Lewis DR, Chen HS, Feuer EJ, Cronin KA (eds). SEER Cancer Statistics Review, 1975-2015, National Cancer Institute. Bethesda, MD, https://seer.cancer.gov/csr/1975_2015/, based on November 2017 SEER data submission, posted to the SEER web site, April 2018.

1 These figures represent the number of people with a history of cancer who were alive in the corresponding year. Some of these individuals were cancer-free, while others still had evidence of cancer.

2 The number of cancer survivors (5-year limited duration) represents the US cancer prevalence counts based on cancer prevalence proportions from the SEER 9 registries and US population estimates. Prevalence estimates here refer to the first invasive tumor ever that was diagnosed within the prior 5 years.