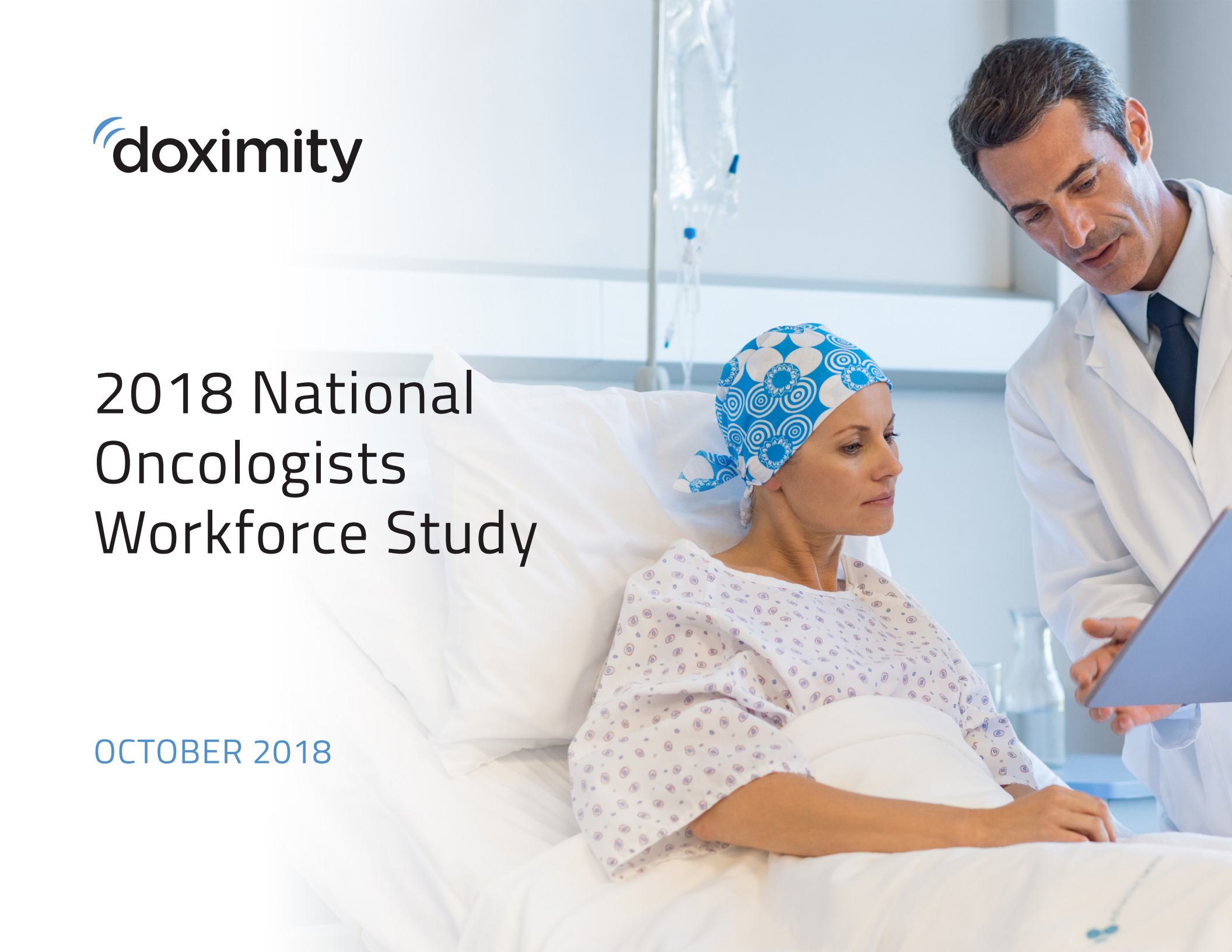
doximity

2018 National Oncologists Workforce Study



OCTOBER 2018

Introduction

Providers have long cautioned that the U.S. healthcare system is facing imminent physician shortages across many different specialties. In oncology, the issue is particularly pronounced. The American Society of Clinical Oncology (ASCO) projects a shortage of over 2,200 oncologists by 2025 amidst a 40 percent growth in the overall demand for oncologist services.[1]

At the same time, the role of the oncologist is evolving. Rapid advancements in cancer treatment technologies, such as new genetic and immunotherapies, are increasing survival rates. However, the surge in new therapies places additional pressure on oncologists to be versed in the latest state-of-the-art treatments, all while navigating the complex needs of delivering long-term care to a growing number of cancer survivors. This increasing workload, including time that must be allocated to EHR requirements, contributes to a high-stress environment which can ultimately lead to physician burnout.

Compounding this burnout is an imminent wave of retiring oncologists. In half of the MSAs we examined, we found over 20 percent of practicing oncologists are already over the age of 65.

Cancer is the second-leading cause of death for American women as of 2015, and instances of breast cancer continue to rise. The National Cancer Institute estimates that there will be 266,120 new cases of breast cancer in 2018.[2]

A shortage of oncologists in line with ASCO's estimates could impact breast cancer care for women. Oncologists provide the first medical consultation following initial mammogram results. In communities with oncologist shortages, women may experience lags between screening, diagnosis and treatment. This can create an emotionally taxing experience for women, especially in light of the high rate of false positives that result from mammogram screenings.[3] Oncologists are also responsible for coordinating care teams, as well as monitoring and managing a patient's health during their treatment. This becomes more challenging as therapies become more complex.

For the first time, this report examines the retirement risk of oncologists across the largest 50 U.S. metropolitan statistical areas (MSAs) by population, drawing on the Doximity profiles of more than 20,696 licensed specialists in this field. The report also explores the percentage of oncologists that are state-trained in order to assess how many younger oncologists leave their training communities – a factor that may contribute to regional oncology shortages.

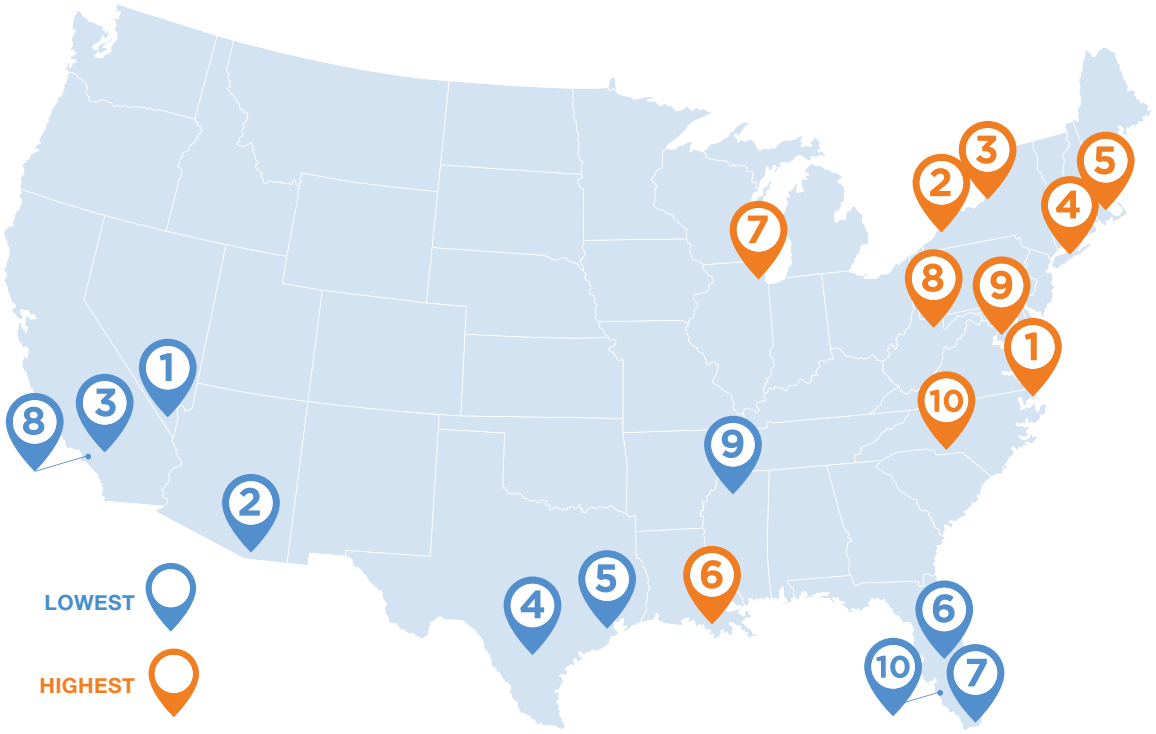
By combining these factors, we identify those cities where shortages of oncologists will appear first.

With more than 70 percent of all U.S. doctors as members, Doximity is the country's largest medical social network. As such, Doximity is uniquely positioned to study this important healthcare issue on both a local and national level.

KEY FINDINGS

Metropolitan Areas with the Highest and Lowest Rates of Breast Cancer

For 2018, we evaluated the rates of breast cancer in women between the ages of 40–75 across various U.S. MSAs to better understand the workload demands for oncologists across the country. We found that there is nearly a 1.5-fold variation in the frequency of breast cancer rates per 100,000.



Metros with the **HIGHEST** Number of Women with Breast Cancer Per 100,000

1	Virginia Beach, VA	337.5
2	Buffalo, NY	322.8
3	Rochester, NY	312.7
4	Hartford, CT	311.3
5	Boston, MA	307.3
6	New Orleans, LA	307.2
7	Milwaukee, WI	302.9
8	Pittsburgh, PA	297.5
9	Baltimore, MD	296.8
10	Charlotte, NC	296.8

Metros with the **LOWEST** Number of Women with Breast Cancer Per 100,000

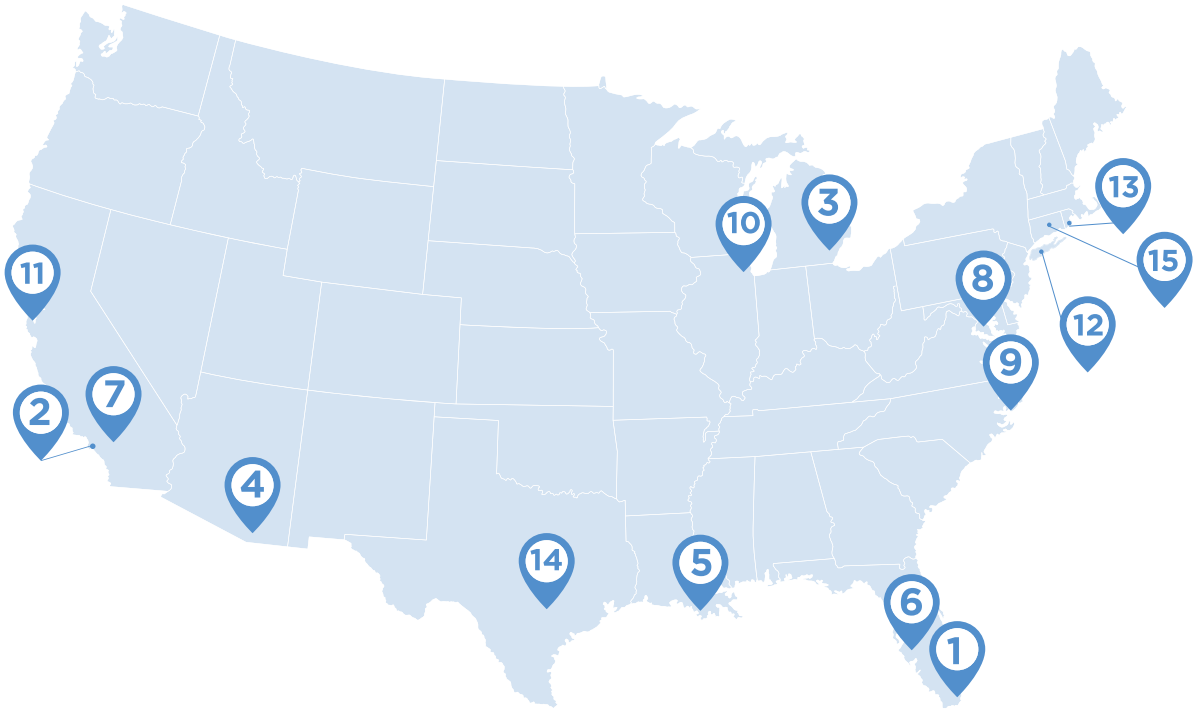
1	Las Vegas, NV	227
2	Tucson, AZ	232.2
3	Riverside, CA	235.9
4	San Antonio, TX	242.9
5	Houston, TX	244.1
6	Orlando, FL	245.4
7	Miami, FL	246.5
8	Los Angeles, CA	248.8
9	Memphis, TN	250.9
10	North Port, FL	252.3

KEY FINDINGS

Metropolitan Areas with specialists over the age of 65

In many communities, there is both a higher rate of breast cancer among women and a large portion of oncologists currently in retirement age (over the age of 65). A recent survey of oncologists indicates that the expected retirement age is 64.3 and that any oncologist still in the workforce at 64 plans to retire within the following 3-4 years.[4]

Doximity's analysis found that there is a 2.5-fold variation in the percentage of oncologists that are above retirement age across the U.S.



TOP 15 metropolitan areas with **HIGHEST** percentage of oncologists above retirement age

1	Miami, FL	27.93%
2	Los Angeles, CA	27.74%
3	Detroit, MI	27.17%
4	Tucson, AZ	26.87%
5	New Orleans, LA	26.51%
6	Tampa, FL	26.36%
7	Riverside, CA	26.19%
8	Washington DC	26.05%
9	Virginia Beach, VA	25.97%
10	Chicago, IL	25.94%

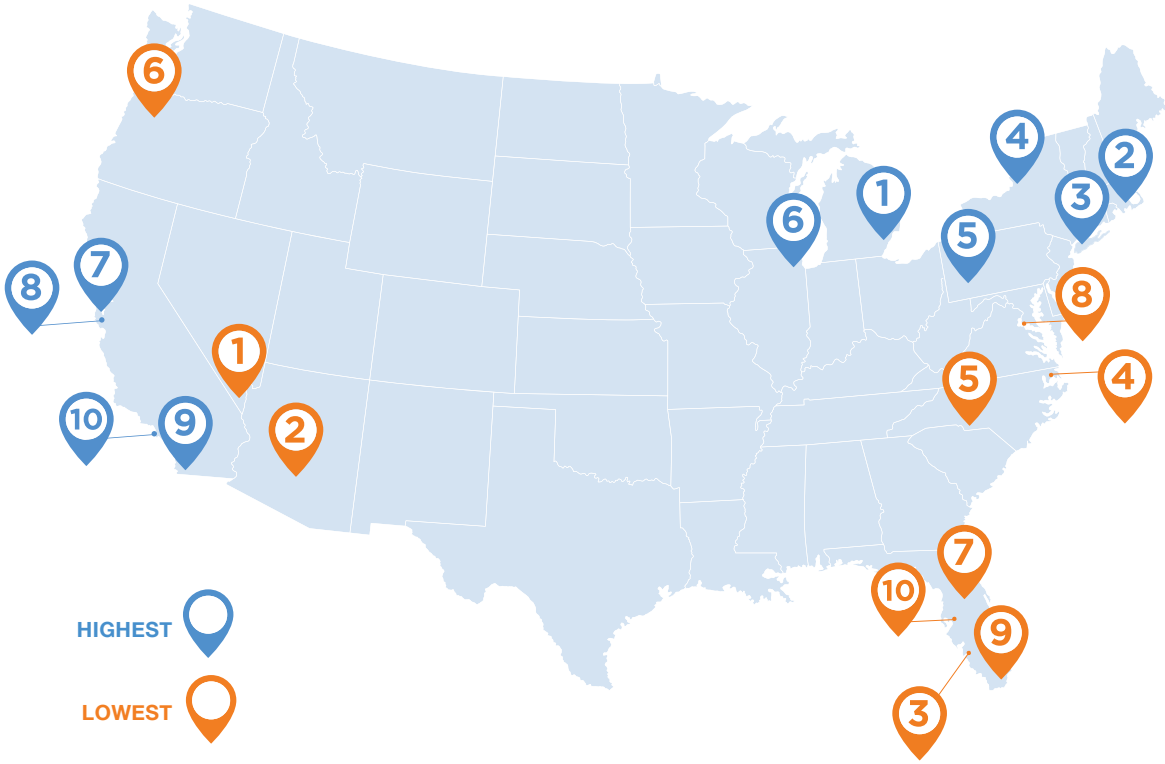
11	San Francisco, CA	25.67%
12	New York, NY	25.29%
13	Providence, RI	24.81%
14	Austin, TX	24.36%
15	Hartford, CT	22.83%

KEY FINDINGS

12-Fold Variation in Locally Trained Oncologists Across Metro Areas

Graduate Medical Education (GME) across the U.S. is funded by the federal and state government in addition to contributions and grants from teaching hospitals. State and private funding for residency and fellowship programs can range widely. For example, California[5] has allocated $40 million while Florida has provided $97 million to GME programs.[6] These locally-provided resources are designed to teach and ideally retain top medical talent. However, our analysis shows that oncologists who have been trained locally vary widely from state to state and metro to metro.

In each of the 50 largest metro areas, Doximity compared the number of oncologists who were trained within the state that they are currently practicing in to those who completed their residencies and/or fellowships outside of that state. The ratio ranged from a mere 7 percent of doctors in Las Vegas metro area were actually trained in-state, vs. 77 percent in the Detroit area, a 12-fold variation in oncologist retention. Nationally, an average of 48 percent of oncologists continue practicing where they were originally trained.



Metros with the **HIGHEST** Percentages of State-trained Oncologists

1	Detroit, MI	77.90%
2	Boston, MA	73.87%
3	New York, NY	72.79%
4	Rochester, NY	71.08%
5	Pittsburgh, PA	70.13%
6	Chicago, IL	69.21%
7	San Francisco, CA	67.65%
8	San Jose, CA	67.14%
9	San Diego, CA	66.67%
10	Los Angeles, CA	65.84%

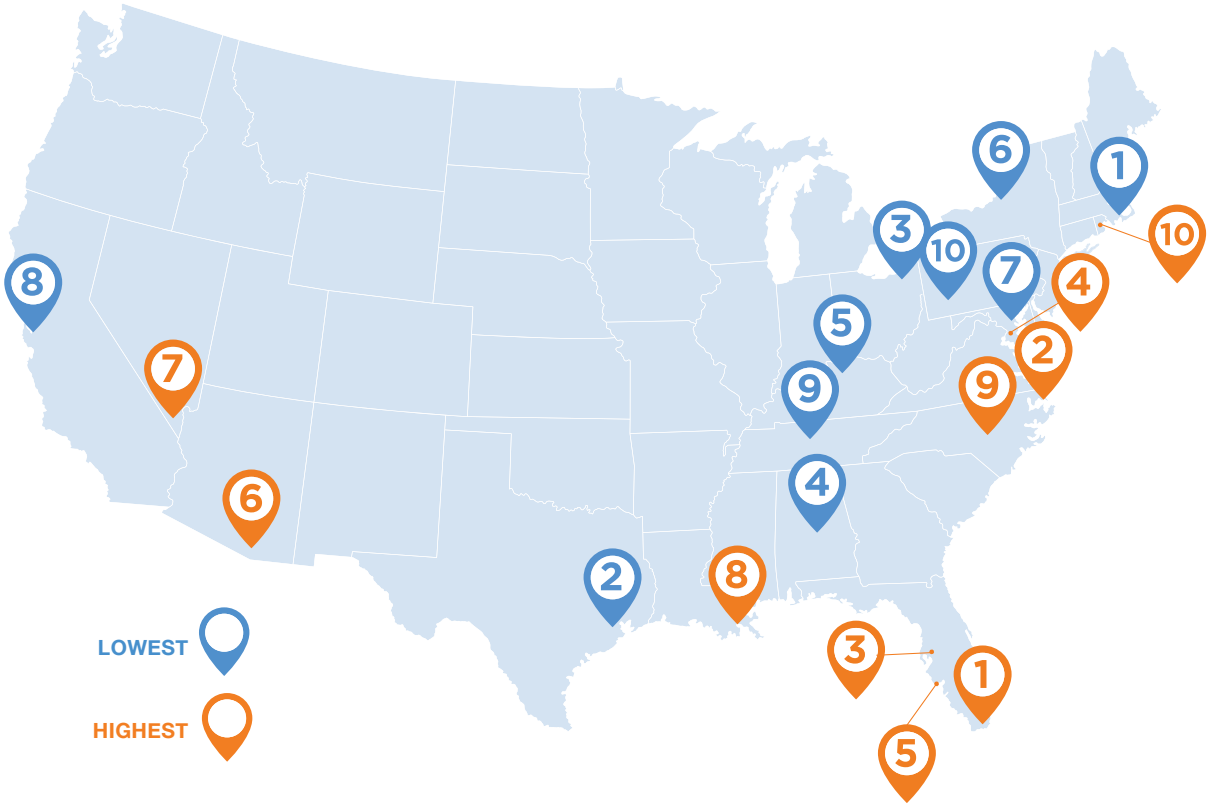
Metros with the **LOWEST** Percentages of State-trained Oncologists

1	Las Vegas, NV	7.14%
2	Phoenix, AZ	12.20%
3	North Port, FL	22.22%
4	Virginia Beach, VA	23.38%
5	Charlotte, NC	26.03%
6	Portland, OR	30.77%
7	Orlando, FL	31.11%
8	Washington DC	31.72%
9	Miami, FL	34.31%
10	Tampa, FL	35.15%

KEY FINDINGS

Risk Index: Highest and Lowest Risk Metros for Oncologist Shortages

Combining these factors, Doximity developed a composite index score to assess how severe the risk of oncologist shortages is in each of the top 50 metropolitan areas. In the metros with higher percentages of older oncologists, and fewer state-trained oncologists, we expect there to be a greater risk of shortages.



Metropolitan Areas with the **HIGHEST RISK OF SHORTAGES**

1	Miami, FL
2	Virginia Beach, VA
3	Tampa, FL
4	Washington DC
5	North Port, FL
6	Tucson, AZ
7	Las Vegas, NV
8	New Orleans, LA
9	Raleigh, NC
10	Providence, RI

Metropolitan Areas with the **LOWEST RISK OF SHORTAGES**

1	Boston, MA
2	Houston, TX
3	Cleveland, OH
4	Birmingham, AL
5	Cincinnati, OH
6	Rochester, NY
7	Baltimore, MD
8	San Jose, CA
9	Nashville, TN
10	Pittsburgh, PA

Conclusion

The coming retirement wave in oncology, growing workload demands and talent retention issues are critical concerns for breast cancer treatment.

While this study cannot determine causation for the variation in specialist training retention rates, breast cancer rates or shortages across metropolitan areas, we hope it will serve as a helpful resource to training facilities, policymakers, patient advocates and others interested in further study of this topic. This information may also be helpful for oncologists looking to live in areas with a growing need for specialists in their field.

Methodology

Doximity's study is drawn from CMS data, board certification data, and self-reported data on more than 20,000 full-time, board-certified oncology practitioners. Responses were mapped across metropolitan statistical areas (MSAs), and the top 50 MSAs were selected by the population of women above age 40 according to 2010 Census data.

The age-adjusted breast cancer incidence data comes from the 2014 United States Cancer Statistics and the Center for Disease Control's WONDER database.

References

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4. Clemons, M. J., Vandermeer, L. A., Gunstone, I., Jacobs, C., Kaizer, L., & Paterson, A. H. (2013). Lost in Transition? Thoughts on Retirement—"Will You Still Need Me, Will You Still Feed Me, When I'm Sixty-Four?" The Oncologist, 18(11), 1235–1238. http://doi.org/10.1634/theoncologist.2013-0173

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APPENDIX

Full List of Oncologist Shortages Index, Highest to Lowest Risk

1	Miami, FL	11	Hartford, CT	21	Portland, OR	31	Denver, CO	41	Pittsburgh, PA
2	Virginia Beach, VA	12	Riverside, CA	22	Detroit, MI	32	Memphis, TN	42	Nashville, TN
3	Tampa, FL	13	Atlanta, GA	23	Dallas, TX	33	Richmond, VA	43	San Jose, CA
4	Washington DC	14	Austin, TX	24	Milwaukee, WI	34	San Antonio, TX	44	Baltimore, MD
5	North Port, FL	15	Los Angeles, CA	25	Charlotte, NC	35	Sacramento, CA	45	Rochester, NY
6	Tucson, AZ	16	Seattle, WA	26	Chicago, IL	36	New York, NY	46	Cincinnati, OH
7	Las Vegas, NV	17	Indianapolis, IN	27	San Francisco, CA	37	Philadelphia, PA	47	Birmingham, AL
8	New Orleans, LA	18	Louisville, KY	28	Oklahoma City, OK	38	San Diego, CA	48	Cleveland, OH
9	Raleigh, NC	19	Phoenix, AZ	29	Jacksonville, FL	39	Columbus, OH	49	Houston, TX
10	Providence, RI	20	Orlando, FL	30	Buffalo, NY	40	St. Louis, MO	50	Boston, MA

APPENDIX

Full list of MSAs ranked by highest incidence of breast cancer per 100,000 (note women are between the ages of 40-75)

1	Virginia Beach, VA	337.5	18	San Diego, CA	293	35	Columbus, OH	268.6
2	Buffalo, NY	322.8	19	Richmond, VA	291.9	36	Nashville, TN	267.2
3	Rochester, NY	312.7	20	Louisville, KY	290.1	37	Phoenix, AZ	265.4
4	Hartford, CT	311.3	21	Cleveland, OH	289.6	38	Tampa, FL	262.7
5	Boston, MA	307.3	22	Denver, CO	288.6	39	San Jose, CA	257.4
6	New Orleans, LA	307.2	23	New York, NY	284.3	40	Dallas, TX	252.8
7	Milwaukee, WI	302.9	24	Detroit, MI	281.6	41	North Port, FL	252.3
8	Pittsburgh, PA	297.5	25	Providence, RI	281	42	Memphis, TN	250.9
9	Baltimore, MD	296.8	26	Birmingham, AL	281	43	Los Angeles, CA	248.8
10	Charlotte, NC	296.8	27	Portland, OR	279.1	44	Miami, FL	246.5
11	Cincinnati, OH	296.7	28	Oklahoma City, OK	279	45	Orlando, FL	245.4
12	St. Louis, MO	296.6	29	Washington DC	278.6	46	Houston, TX	244.1
13	Seattle, WA	296.4	30	Jacksonville, FL	277.3	47	San Antonio, TX	242.9
14	Indianapolis, IN	295.3	31	San Francisco, CA	277.2	48	Riverside, CA	235.9
15	Raleigh, NC	293.7	32	Sacramentoe, CA	276.4	49	Tucson, AZ	232.2
16	Philadelphia, PA	293.3	33	Austin, TX	274.6	50	Las Vegas, NV	227
17	Chicago, IL	293.1	34	Atlanta, GA	271.9			

APPENDIX

Full list of MSAs with percentage of oncologists above retirement age (65+)

1	Miami, FL	27.93%
2	Los Angeles, CA	27.74%
3	Detroit, MI	27.17%
4	Tucson, AZ	26.87%
5	New Orleans, LA	26.51%
6	Tampa, FL	26.36%
7	Riverside, CA	26.19%
8	Washington DC	26.05%
9	Virginia Beach, VA	25.97%
10	Chicago, IL	25.94%
11	San Francisco, CA	25.67%
12	New York, NY	25.29%
13	Providence, RI	24.81%
14	Austin, TX	24.36%
15	Hartford, CT	22.83%
16	North Port, FL	22.22%
17	Raleigh, NC	21.82%
18	Buffalo, NY	21.28%
19	San Diego, CA	21.21%
20	Pittsburgh, PA	20.78%
21	Oklahoma City, OK	20.65%
22	Louisville, KY	20.43%
23	Seattle, WA	20.22%
24	Philadelphia, PA	20.18%
25	San Jose, CA	20.00%
26	San Antonio, TX	19.71%
27	Rochester, NY	19.28%
28	Atlantal, GA	19.05%
29	Las Vegas, NV	19.05%
30	Richmond, VA	18.75%
31	Sacramento, CA	18.57%
32	Dallas, TX	18.51%
33	Baltimore, MD	18.41%
34	St. Louis, MO	17.80%
35	Indianapolis, IN	17.65%
36	Milwaukee, WI	17.53%
37	Cincinnati, OH	17.04%
38	Denver, CO	16.84%
39	Boston, MA	16.42%
40	Columbus, OH	16.23%
41	Jacksonville, FL	16.18%
42	Birmingham, AL	15.63%
43	Orlando, FL	15.56%
44	Memphis, TN	15.48%
45	Portland, OR	15.38%
46	Houston, TX	15.36%
47	Phoenix, AZ	15.35%
48	Cleveland, OH	15.20%
49	Charlotte, NC	12.33%
50	Nashville, TN	10.84%

APPENDIX

Full list of MSAs with percentages of State-trained vs. externally trained oncologists

1	Detroit, MI	77.90%
2	Boston, MA	73.87%
3	New York, NY	72.79%
4	Rochester, NY	71.08%
5	Pittsburgh, PA	70.13%
6	Chicago, IL	69.21%
7	San Francisco, CA	67.65%
8	San Jose, CA	67.14%
9	San Diego, CA	66.67%
10	Los Angeles, CA	65.84%
11	Baltimore, MD	63.81%
12	Houston, TX	63.14%
13	Buffalo, NY	62.77%
14	Cincinnati, OH	61.48%
15	Philadelphia, PA	60.55%
16	Cleveland, OH	60.40%
17	Oklahoma City, OK	59.78%
18	San Antonio, TX	58.39%
19	Birmingham, AL	58.33%
20	St. Louis, MO	58.05%
21	Riverside, CA	54.76%
22	Richmond, VA	54.17%
23	Sacramento, CA	53.57%
24	Louisville, KY	52.69%
25	Austin, TX	52.56%
26	New Orleans, LA	51.81%
27	Columbus, OH	51.30%
28	Seattle, WA	49.72%
29	Providence, RI	49.61%
30	Dallas, TX	49.45%
31	Hartford, CT	48.91%
32	Denver, CO	46.84%
33	Tucson, AZ	46.27%
34	Milwaukee, WI	44.16%
35	Nashville, TN	41.57%
36	Raleigh, NC	40.00%
37	Jacksonville, FL	38.97%
38	Memphis, TN	38.10%
39	Indianapolis, IN	35.88%
40	Atlanta, GA	35.56%
41	Tampa, FL	35.15%
42	Miami, FL	34.31%
43	Washington DC	31.72%
44	Orlando, FL	31.11%
45	Portland, OR	30.77%
46	Charlotte, NC	26.03%
47	Virginia Beach VA	23.38%
48	North Port, FL	22.22%
49	Phoenix, AZ	12.20%
50	Las Vegas, NV	7.14%

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Founded in 2011, Doximity connects physicians and advanced practice clinicians to make them more successful and productive. Doximity is the largest secure medical network with over 70 percent of all U.S. physicians as members, enabling collaboration across specialties and every major medical center. Doximity is based in San Francisco and was created by the founders of Epocrates and Rock Health.

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