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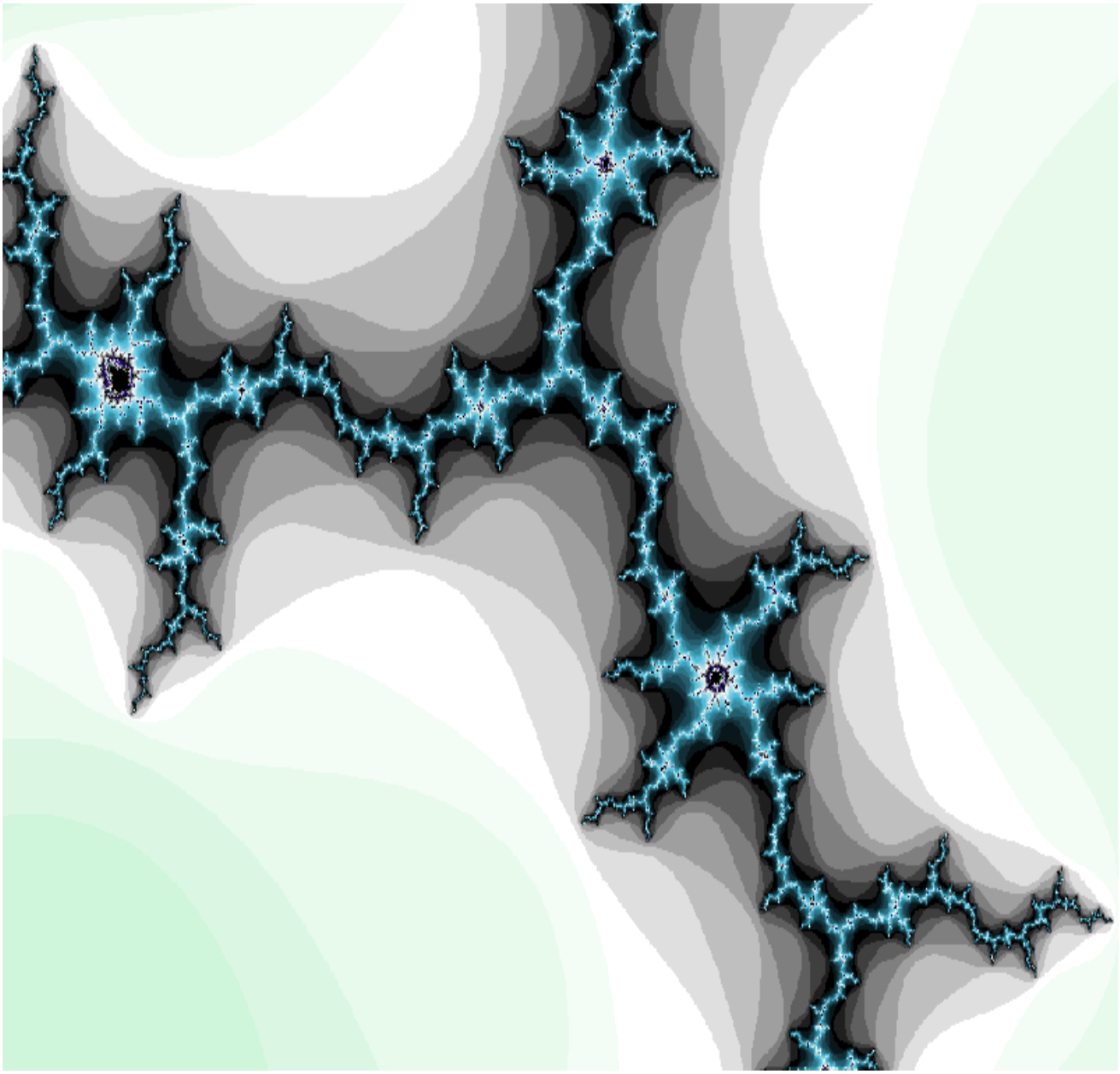
Radiation Therapy Staffing and Workplace Survey 2026



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American Society of Radiologic Technologists

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Executive Summary

Sample

The Radiation Therapy Staffing and Workplace Survey 2026 was emailed to 23,145 radiation therapists and medical dosimetrists in February 2026. At the close of the survey in March 2026, a total of 560 had completed the questionnaire. At its widest, a sample size of 560 yields a margin of error of ± 4.1% for overall percentages at the 95% confidence level, with a response rate of 2.4%.

To keep this report brief, responses to open-ended questions are not included but are available upon request.

Staffing of Facilities

The mean number of budgeted full-time equivalents (FTEs) across all facilities surveyed is:

- 8.1 for radiation therapy.
- 2.8 for medical dosimetry.

An estimation of the overall percentages of unfilled positions was calculated using the number of budgeted FTEs along with figures on vacant and recruiting positions.

In radiation therapy, an estimated 11.4% of FTE positions are unfilled.

In medical dosimetry, an estimated 6.8% of FTE positions are unfilled.

Overall mean percentages of unfilled positions, calculated by combining the figures from both therapy and dosimetry, were highest in the Middle Atlantic region (15.9%) and lowest in New England (6.0%). Overall, the percentage of unfilled positions combining both disciplines was 10.3%.

The survey also tracks longitudinal changes in staffing levels in radiation therapy and medical dosimetry. The number of FTE radiation therapists budgeted at each facility fell by 0.2 from 8.3 to 8.1 between 2024, when the last Radiation Therapy Staffing Survey was conducted, and 2026. Overall, the number of FTE therapists budgeted per facility has increased by 2.1 from 6.0 in 2004 to 8.1 in 2026.

The number of FTE dosimetrists budgeted per facility rose by 0.1 from 2.7 in 2024 to 2.8 in 2026. Overall, the number of FTE dosimetrists budgeted per facility has increased by 1.2 from 1.6 in 2004 to 2.8 in 2026.

- The estimated vacancy rate for FTE positions in therapy fell by 2.2%, from 13.6% in 2024 to 11.4% in 2026. This marks the first time since 2014 that percent vacancy rates for radiation therapy have fallen.
- The estimated vacancy rate for FTE positions in medical dosimetry fell by 2.8%, from 9.6% in 2024 to 6.8% in 2026.

Facility Demographics

A majority of respondents (51.3%) are staff therapists; 17.1% are senior/lead therapists, 7.9% are supervisors/managers, 6.1% are medical dosimetrists and 4.5% are chief therapists.

There were respondents from every U.S. state.

Urban facilities represented the largest share (43.6%) of respondents; 39.7% were suburban, and the remaining 16.7% were rural.

The average respondent to the survey works in a facility that offers 16.0 services in radiation therapy and related fields. The most commonly offered services are:

- CT/simulation (97.8% of facilities).
- Intensity-modulated radiation therapy (IMRT) (97.2% of facilities).
- Cone-beam CT (CBCT) (96.5% of facilities).

The most commonly offered services remain consistent with the results of the last three surveys, albeit with minor changes in position.

The least commonly offered services are:

- Hyperthermia (3.9% of facilities).
- Dynamic adaptive radiation therapy (DART) (8.5% of facilities).
- Proton therapy (10.0% of facilities).

When asked which, if any, services they plan to expand, 57.4% of respondents plan to add additional LINAC therapy units, 17.4% plan to add real-time surface tracking and 17.9% plan to add adaptive planning.

According to the responses provided, the average facility treats 52.4 patients each day and uses 2.2 linear accelerators.

Personnel Demographics

The average respondent works at a facility that schedules 2.5 therapists and 1.2 dosimetrists per linear accelerator. On average, there are 0.8 hours per day when only one therapist is scheduled per linear accelerator.

Turnover

Respondents were asked about the level of turnover their department has experienced over the last year.

Overall, 63.0% of respondents reported turnover in their department. Among departments that have experienced turnover, an average of 3.12 FTE radiation therapists and medical dosimetrists left the department in 2025. Specifically, an average of:

- 0.79 left to work in another profession
- 0.62 left for personal reasons
- 0.43 retired
- 0.16 were terminated with cause
- 0.03 were laid off
- 1.08 left for other reasons

Data Reliability

Outliers

Numeric responses were examined for logically impossible or implausible values. Cross-tabulated scatter plots and boxplots were computed for numeric variables to detect potential outliers. Numeric data that were 3 times greater than the interquartile range above the top quartile were designated as outliers and excluded from the analysis.

Comparison of Management Positions and Remaining Sample

Independent sample *t*-tests (Welch's *t*-test, unequal variances assumed) were conducted to compare staffing variables between respondents in management positions and the remaining total sample. There were no statistically significant differences between groups in budgeted full-time equivalents (FTEs) or vacant positions for either radiation therapy or medical dosimetry ($p > .05$).

Radiation Therapy

	Management Positions			Remaining Sample			Welch's *t*-Test		
	n	Mean	*SD*	n	Mean	*SD*	*t*	df	*p*
Budgeted FTEs	181	8.4	7.6	320	7.9	6.5	-0.73	328	.469
Vacant and Recruiting	181	0.9	1.3	320	0.9	1.5	0.464	408	.643

Medical Dosimetry

	Management Positions			Remaining Sample			Welch's *t*-Test		
	n	Mean	*SD*	n	Mean	*SD*	*t*	df	*p*
Budgeted FTEs	154	2.9	2.6	262	2.8	2.2	-0.489	283	.625
Vacant and Recruiting	154	0.2	0.6	262	0.2	0.4	-1.494	248	.136

Calculation of Percent Vacancy Rates

The estimated proportion of unfilled positions for a given specialty in the population of U.S. hospital-based radiology facilities is calculated as:

(mean number of vacant and recruiting per facility) / (mean number of budgeted FTEs per facility) * 100

For example, in radiation therapy the mean vacant and recruiting positions per facility is 0.92. When divided by the mean budgeted FTE of 8.1, this yields a proportion of unfilled FTE positions of 0.114. Multiplying by 100 to give the percent value, and then rounding to the nearest tenth, gives the percent vacancy rate for radiation therapy of 11.4%.

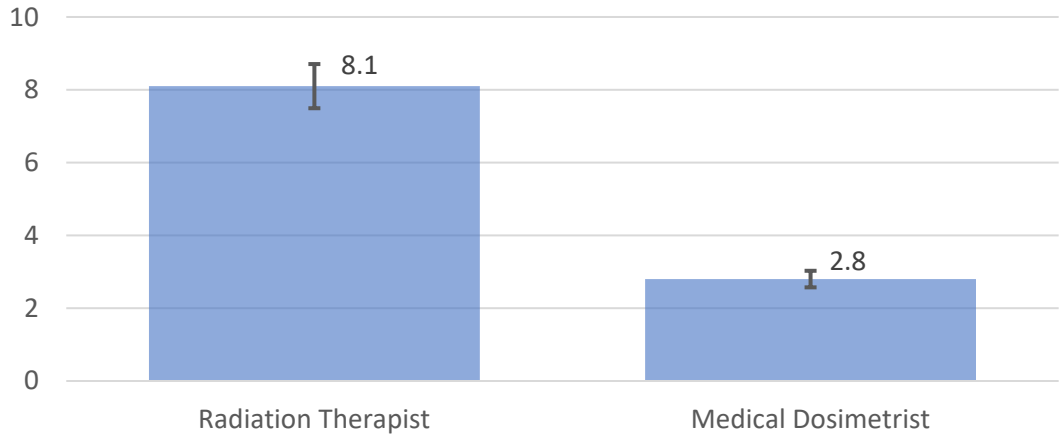
Note that only responses that included both the number of budgeted FTEs and the number of vacant and recruiting were used in the calculation of vacancy rates.

Staffing of Facilities

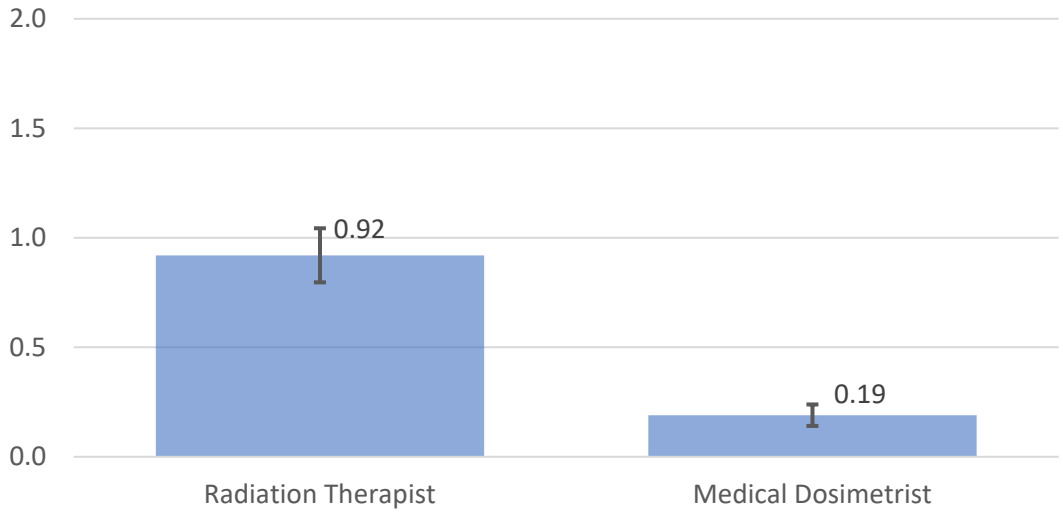
Provide the budgeted and vacant full-time equivalents (FTEs) for your facility. Please use decimals for fractional FTEs.

		Budgeted FTEs			Vacant and Recruiting			
Discipline	N	Mean	*SD*	95% Confidence Interval	Mean	*SD*	95% Confidence Interval	Estimated Percent Vacant FTE Positions
Radiation Therapist	501	**8.1**	6.93	± 0.61	**0.92**	1.41	± 0.12	**11.4%**
Medical Dosimetrist	416	**2.8**	2.37	± 0.23	**0.19**	0.51	± 0.05	**6.8%**

Mean Budgeted FTEs



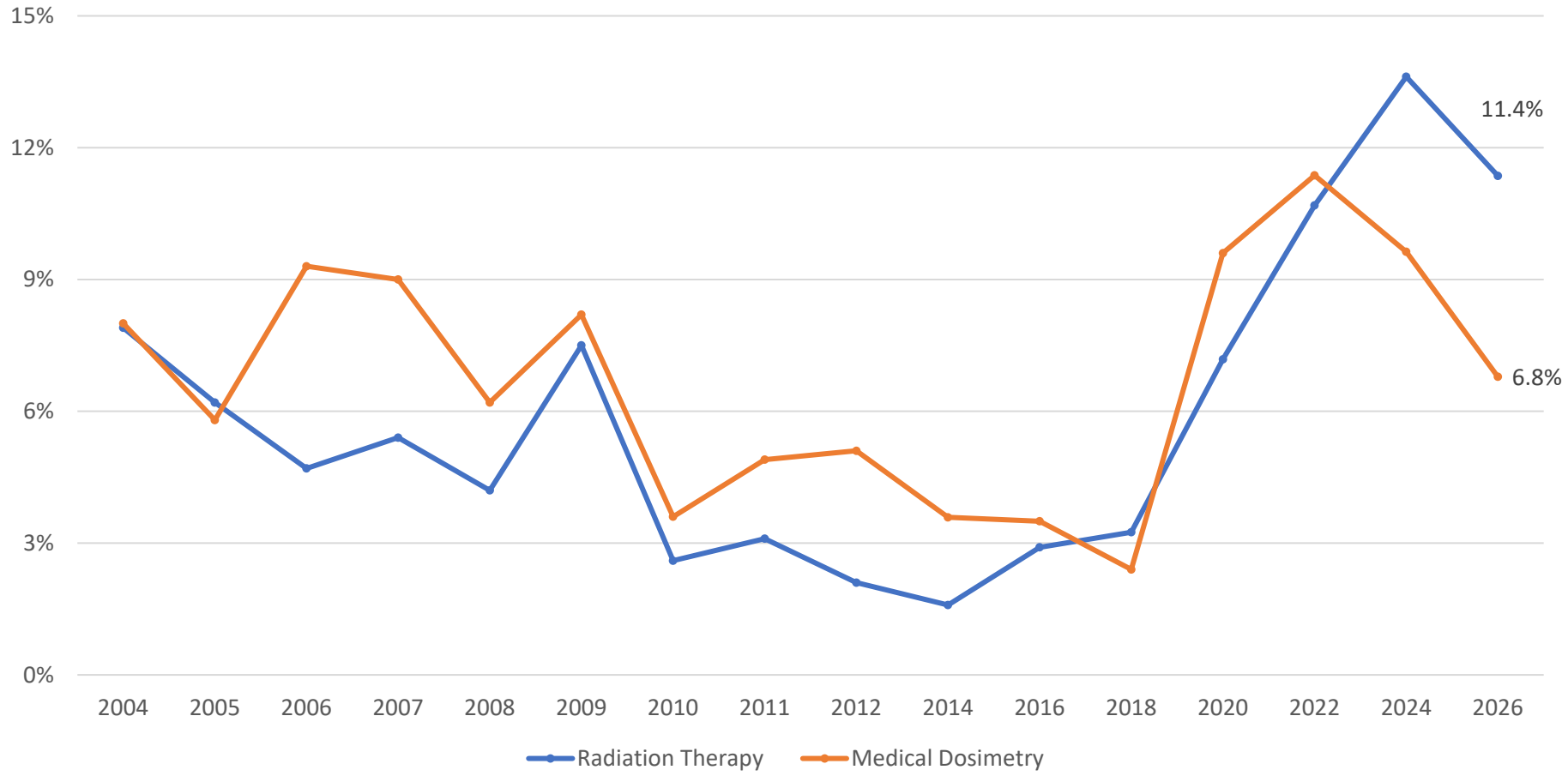
Mean Vacant and Recruiting FTEs



Longitudinal Tracking of Estimated Percent Vacancy Rates

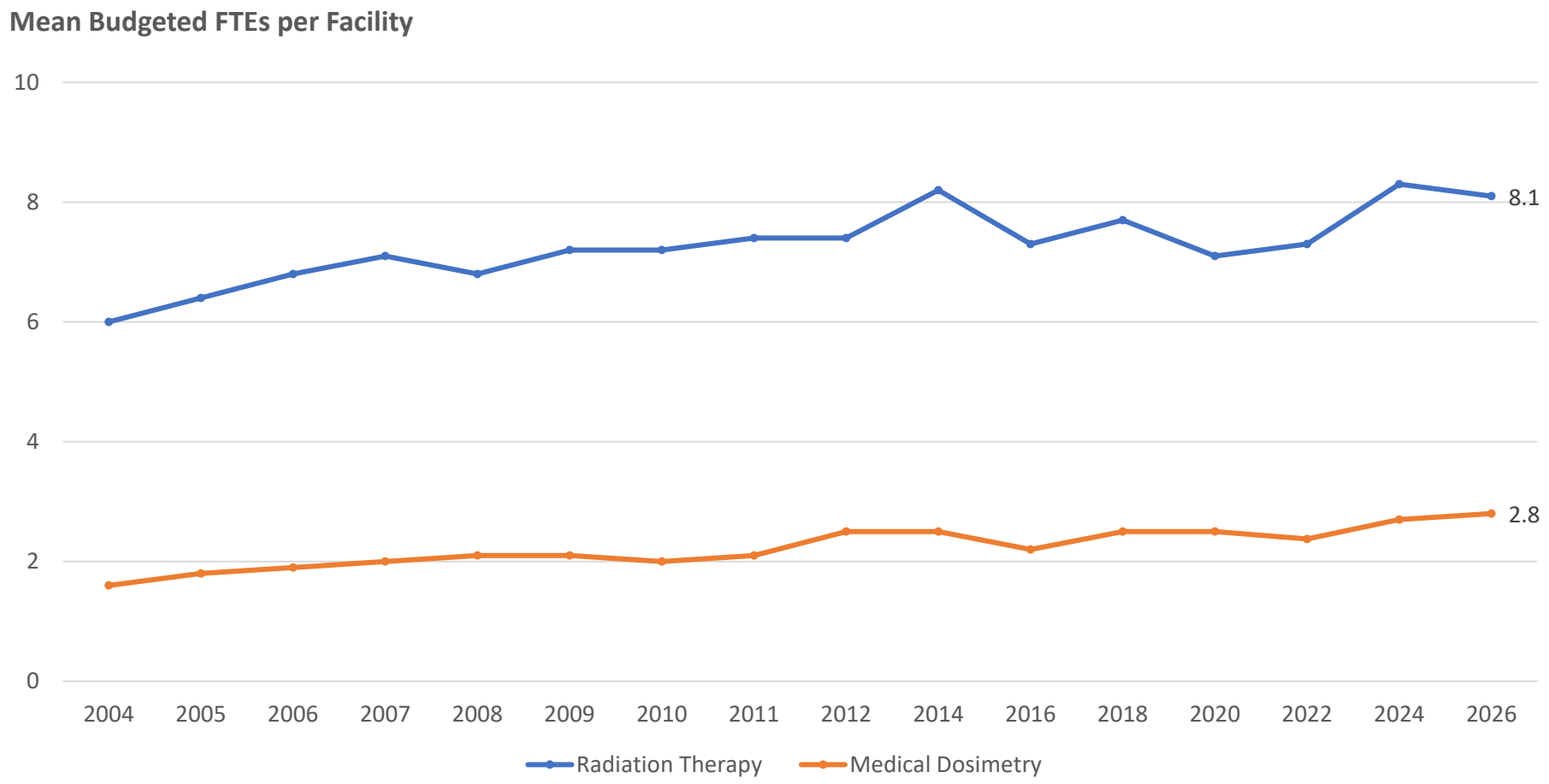
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2014	2016	2018	2020	2022	2024	2026
Radiation Therapy	7.9%	6.2%	4.7%	5.4%	4.2%	7.5%	2.6%	3.1%	2.1%	1.6%	2.9%	3.2%	7.2%	10.7%	13.6%	**11.4%**
Medical Dosimetry	8.0%	5.8%	9.3%	9.0%	6.2%	8.2%	3.6%	4.9%	5.1%	3.6%	3.5%	2.4%	9.6%	11.4%	9.6%	**6.8%**

Longitudinal Tracking of Estimated Percent Unfilled FTE Positions



Longitudinal Tracking of Mean Budgeted FTEs

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2014	2016	2018	2020	2022	2024	2026
Radiation Therapy	6.0	6.4	6.8	7.1	6.8	7.2	7.2	7.4	7.4	8.2	7.3	7.7	7.1	7.3	8.3	**8.1**
Medical Dosimetry	1.6	1.8	1.9	2.0	2.1	2.1	2.0	2.1	2.5	2.5	2.2	2.5	2.5	2.4	2.7	**2.8**

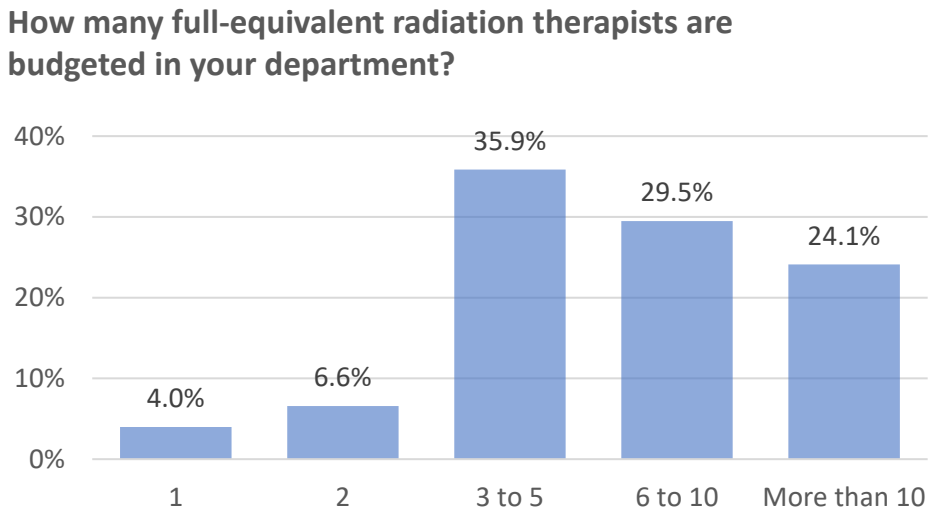


How many full-time equivalent radiation therapists are budgeted in your department?

	N	Valid Percent	Cumulative Percent
1	20	4.0%	4.0%
2	33	6.6%	10.6%
3 to 5	180	35.9%	46.4%
6 to 10	148	29.5%	75.9%
More than 10	121	24.1%	100.0%
Total	**502**	**100.0%**	

Descriptive Statistics

Mean	**8.1** (*SD = 6.9*)
Percentiles	5th = 2.0, 25th = 3.0, 50th = 6.0, 75th = 10.0, 95th = 22.9

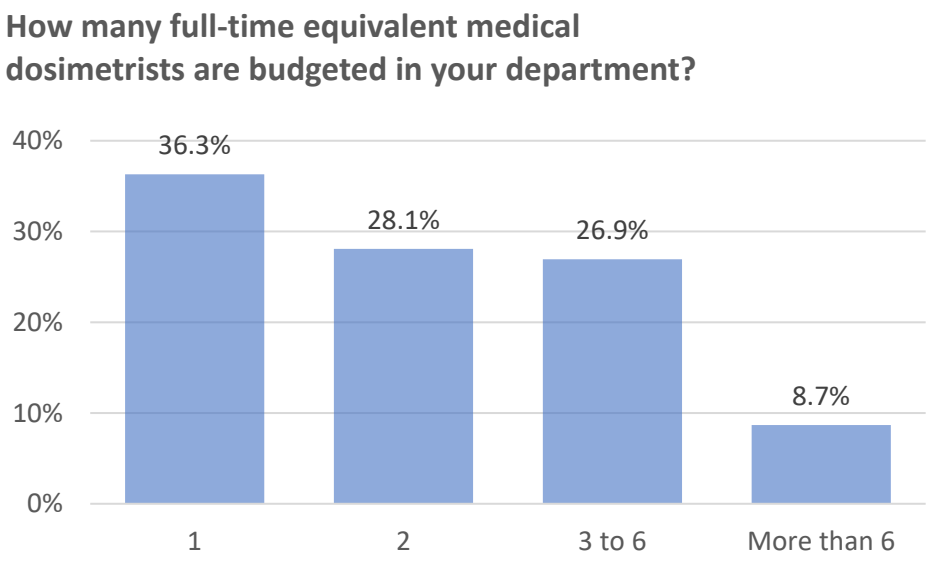


How many full-time equivalent medical dosimetrists are budgeted in your department?

	N	Valid Percent	Cumulative Percent
1	159	36.3%	36.3%
2	123	28.1%	64.4%
3 to 6	118	26.9%	91.3%
More than 6	38	8.7%	100.0%
Total	**438**	**100.0%**	

Descriptive Statistics

Mean	**2.8** (*SD = 2.4*)
Percentiles	5th = 1.0, 25th = 1.0, 50th = 2.0 75th = 3.6, 95th = 8.0



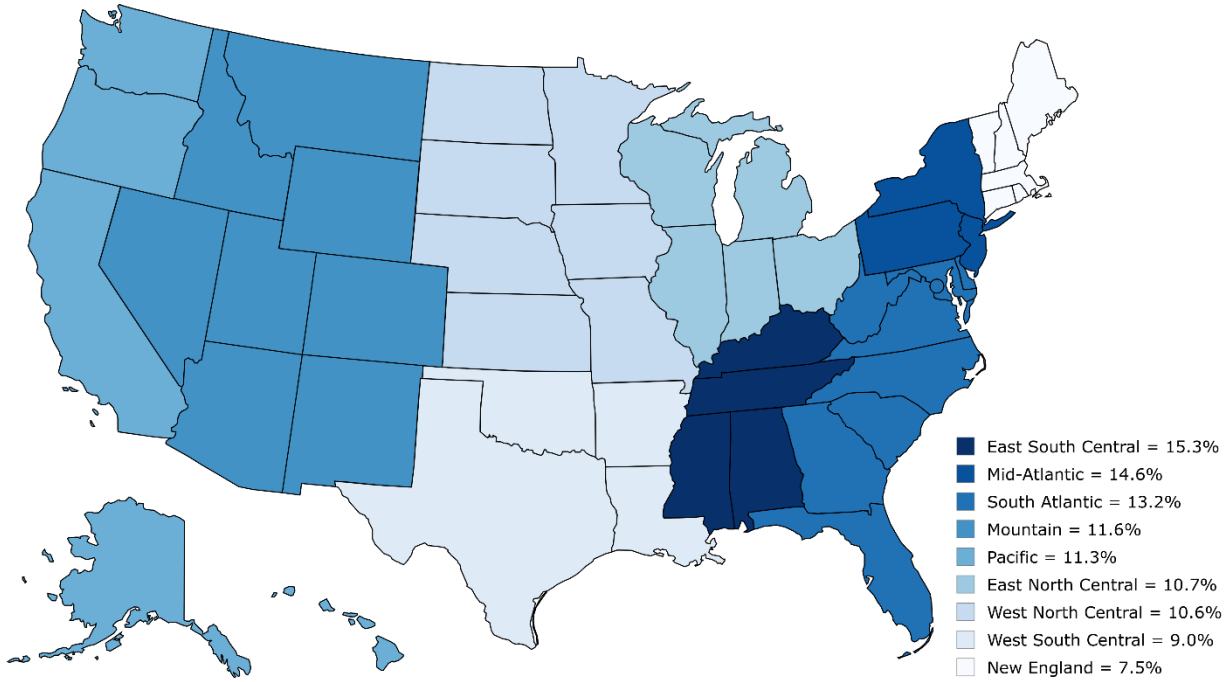
2026 Estimated Percent Vacancy Rate by Geographic Region[a]

Discipline	Statistic	East South Central	Middle Atlantic	South Atlantic	Mountain	Pacific	East North Central	West North Central	West South Central	New England	Total
Radiation Therapy	N	31	27	101	79	41	52	78	47	37	493
	%	14.6%	15.3%	13.2%	11.6%	10.6%	11.3%	10.7%	9.0%	7.5%	11.5%
Medical Dosimetry	N	27	23	81	57	37	47	67	40	30	409
	%	17.4%	2.5%	5.3%	7.1%	9.2%	6.3%	3.9%	8.0%	4.3%	6.3%
Overall		**15.2%**	**11.9%**	**11.4%**	**10.7%**	**10.2%**	**10.2%**	**9.1%**	**8.8%**	**6.8%**	**10.3%**

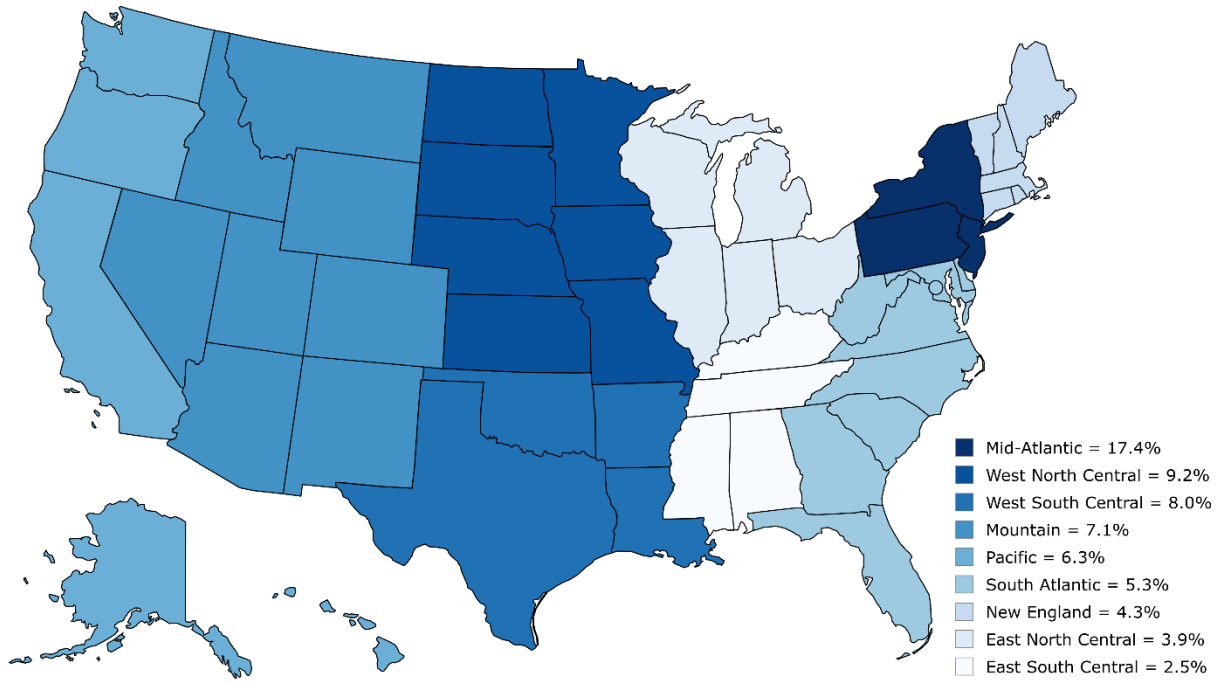
Note. Regions are sorted on overall.

[a] East South Central: Kentucky, Tennessee, Mississippi and Alabama
Middle Atlantic: New York, Pennsylvania and New Jersey
South Atlantic: Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia and Florida
Mountain: Idaho, Montana, Wyoming, Nevada, Utah, Colorado, Arizona and New Mexico
Pacific: Alaska, Washington, Oregon, California and Hawaii
East North Central: Wisconsin, Michigan, Illinois, Indiana and Ohio
West North Central: Missouri, North Dakota, South Dakota, Nebraska, Kansas, Minnesota and Iowa
West South Central: Oklahoma, Texas, Arkansas and Louisiana
New England: Maine, New Hampshire, Vermont, Massachusetts, Rhode Island and Connecticut

Radiation Therapy Estimated Percent Vacancy Rate by Geographic Region



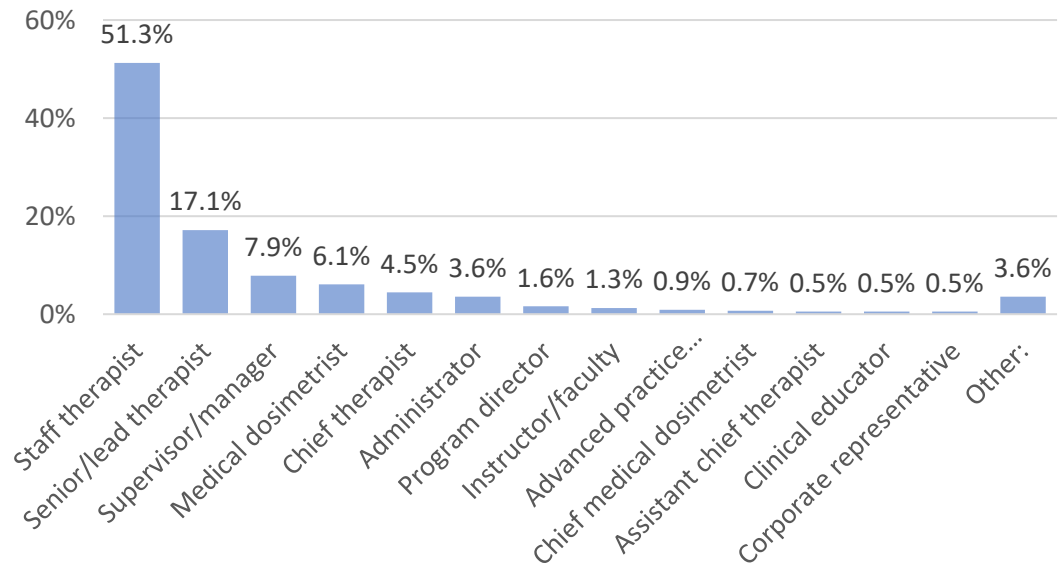
Medical Dosimetry Estimated Percent Vacancy Rate by Geographic Region



Facility Demographics

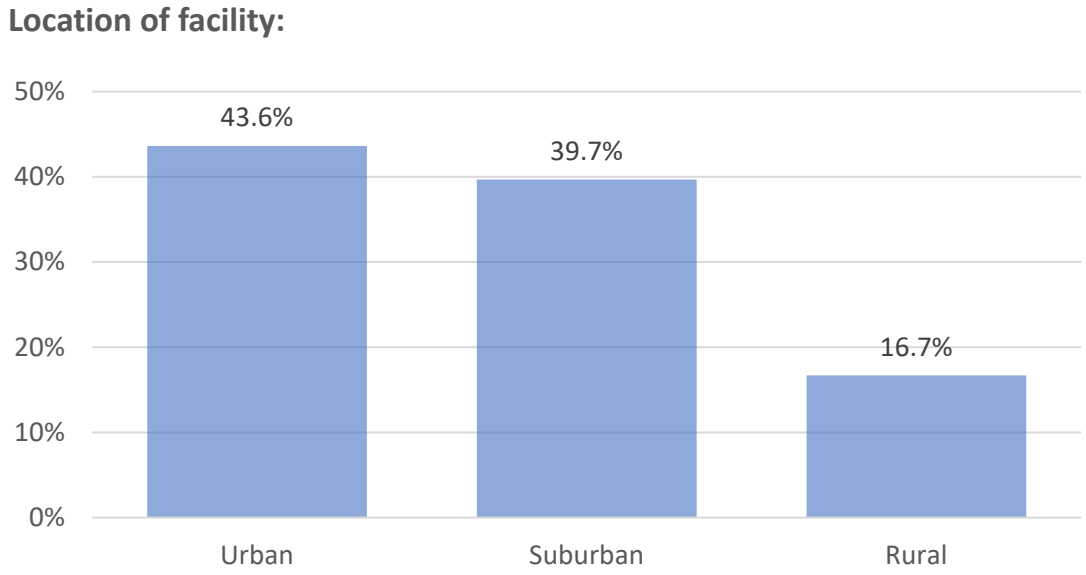
What is your primary job function?

	N	Percent
Staff therapist	287	51.3%
Senior/lead therapist	96	17.1%
Supervisor/manager	44	7.9%
Medical dosimetrist	34	6.1%
Chief therapist	25	4.5%
Administrator	20	3.6%
Program director	9	1.6%
Instructor/faculty	7	1.3%
Advanced practice radiation therapist	5	0.9%
Chief medical dosimetrist	4	0.7%
Assistant chief therapist	3	0.5%
Clinical educator	3	0.5%
Corporate representative	3	0.5%
Other:	20	3.6%
Total	**560**	**100.0%**



Location of Facility:

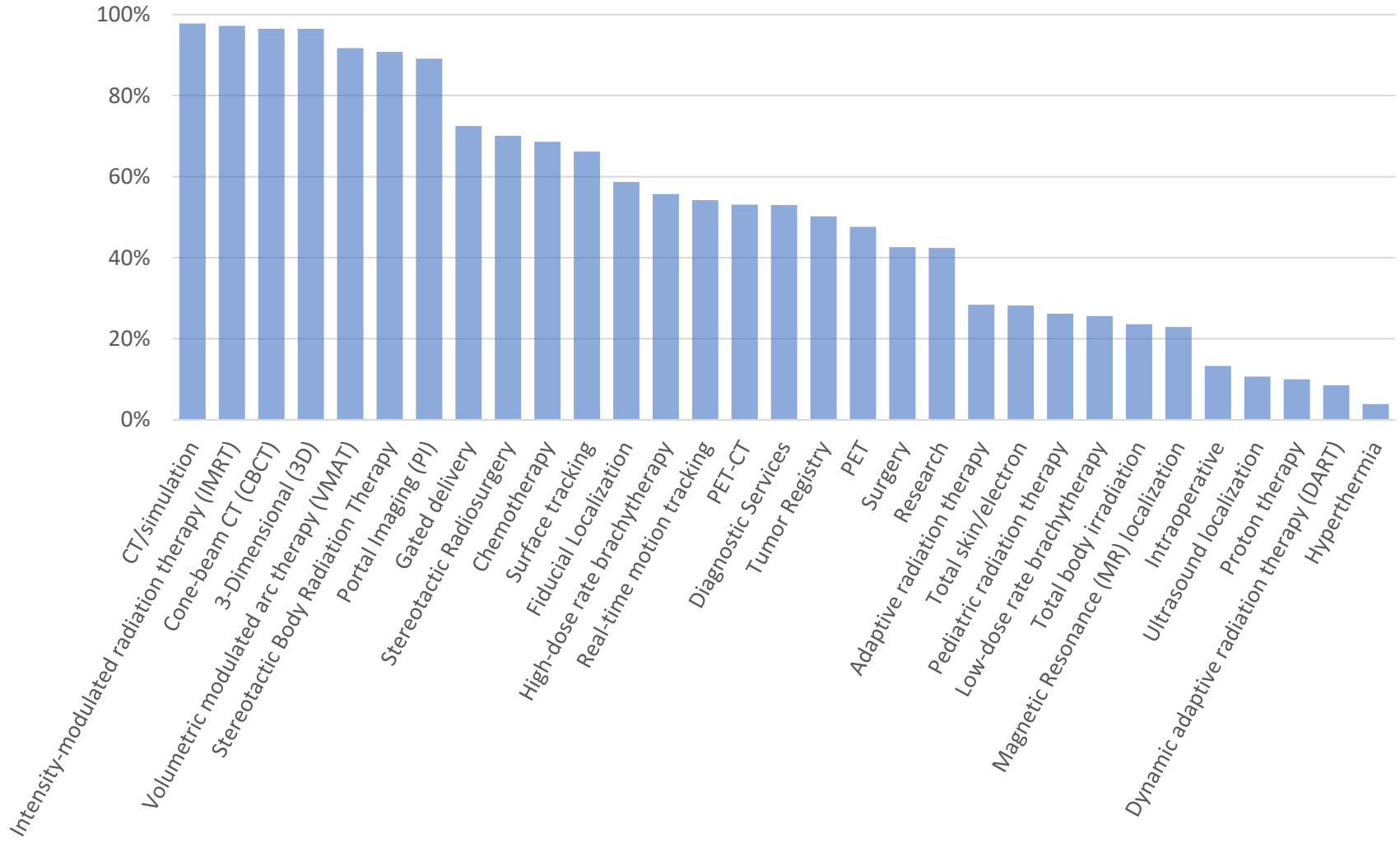
	N	Valid Percent
Urban	243	43.6%
Suburban	221	39.7%
Rural	93	16.7%
Total	**557**	**100.0%**



Which of the following services does your facility provide?

	N	Percent of Cases
CT/simulation	530	97.8%
Intensity-modulated radiation therapy (IMRT)	527	97.2%
Cone-beam CT (CBCT)	523	96.5%
3-Dimensional (3D)	523	96.5%
Volumetric modulated arc therapy (VMAT)	497	91.7%
Stereotactic Body Radiation Therapy	492	90.8%
Portal Imaging (PI)	483	89.1%
Gated delivery	393	72.5%
Stereotactic Radiosurgery	380	70.1%
Chemotherapy	372	68.6%
Surface tracking	359	66.2%
Fiducial Localization	318	58.7%
High-dose rate brachytherapy	302	55.7%
Real-time motion tracking	294	54.2%
PET-CT	288	53.1%
Diagnostic Services	287	53.0%
Tumor Registry	272	50.2%
PET	258	47.6%
Surgery	231	42.6%
Research	230	42.4%
Adaptive radiation therapy	154	28.4%
Total skin/electron	153	28.2%
Pediatric radiation therapy	142	26.2%
Low-dose rate brachytherapy	139	25.6%
Total body irradiation	128	23.6%
Magnetic Resonance (MR) localization	124	22.9%
Intraoperative	72	13.3%
Ultrasound localization	58	10.7%
Proton therapy	54	10.0%
Dynamic adaptive radiation therapy (DART)	46	8.5%
Hyperthermia	21	3.9%

Which of the following services does your facility provide?



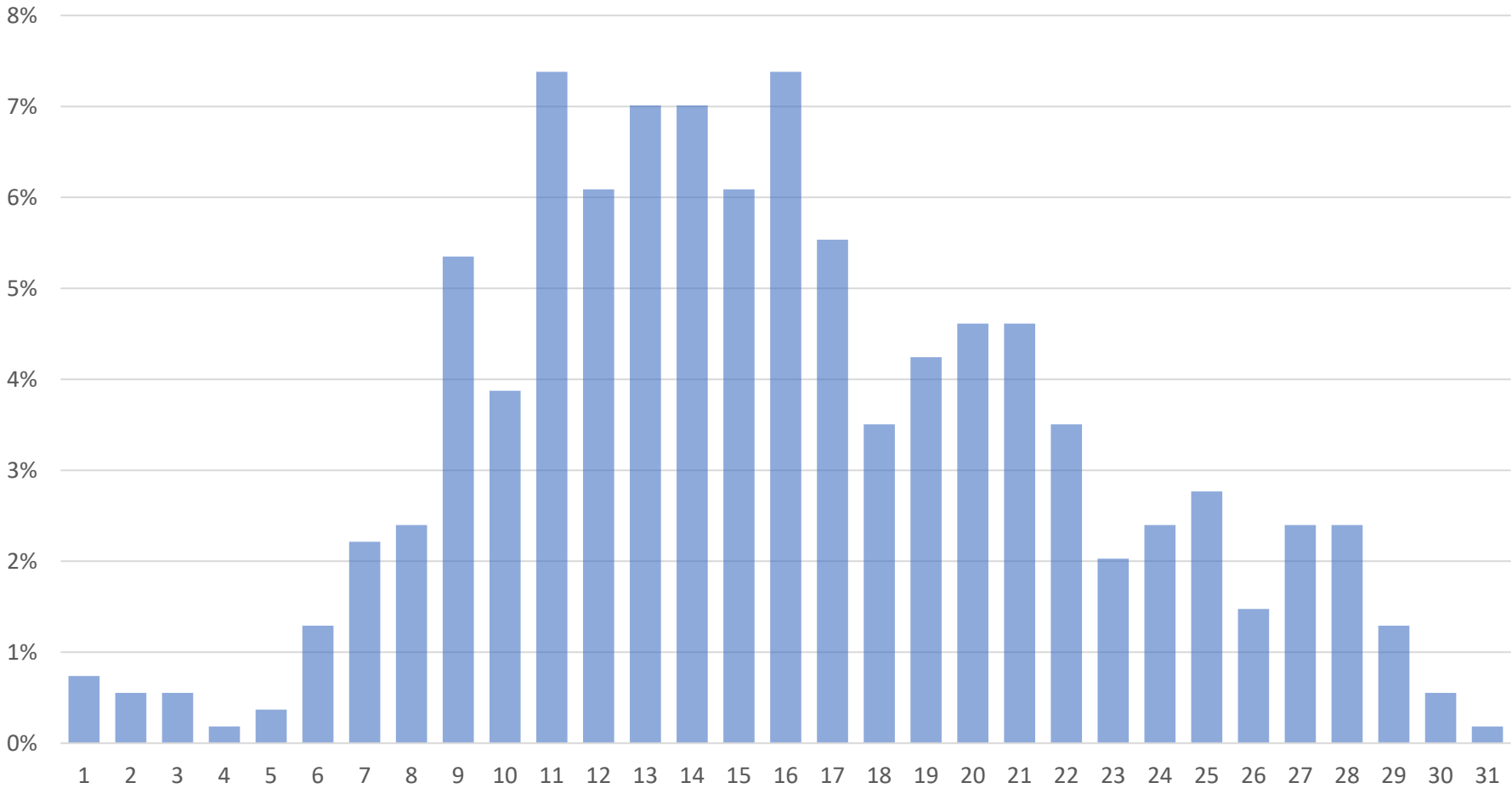
Number of Services Provided by Each Facility

	N	Valid Percent	Cumulative Percent
1	4	0.7%	0.7%
2	3	0.6%	1.3%
3	3	0.6%	1.8%
4	1	0.2%	2.0%
5	2	0.4%	2.4%
6	7	1.3%	3.7%
7	12	2.2%	5.9%
8	13	2.4%	8.3%
9	29	5.4%	13.7%
10	21	3.9%	17.5%
11	40	7.4%	24.9%
12	33	6.1%	31.0%
13	38	7.0%	38.0%
14	38	7.0%	45.0%
15	33	6.1%	51.1%
16	40	7.4%	58.5%
17	30	5.5%	64.0%
18	19	3.5%	67.5%
19	23	4.2%	71.8%
20	25	4.6%	76.4%
21	25	4.6%	81.0%
22	19	3.5%	84.5%
23	11	2.0%	86.5%
24	13	2.4%	88.9%
25	15	2.8%	91.7%
26	8	1.5%	93.2%
27	13	2.4%	95.6%
28	13	2.4%	98.0%
29	7	1.3%	99.3%
30	3	0.6%	99.8%
31	1	0.2%	100.0%
Total	**542**	**100.0%**	

Descriptive Statistics

Mean	**16.0** (*SD* = 6.1)
Percentiles	5th = 7.0, 25th = 11.8, 50th = 15.0, 75th = 20.0, 95th = 27.0

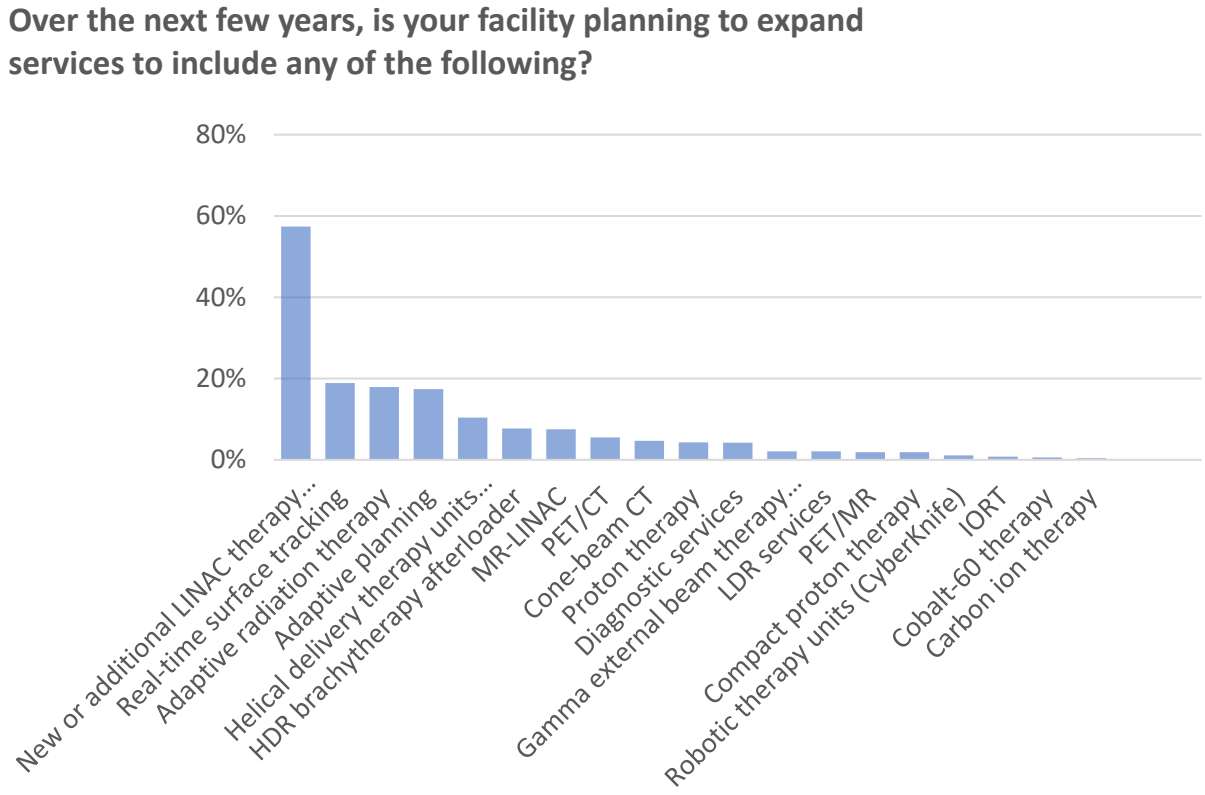
Number of Service Offered:



Over the next few years, is your facility planning to expand services to include any of the following?[a]

	N	Percent of Cases
New or additional LINAC therapy units	304	57.4%
Real-time surface tracking	100	18.9%
Adaptive radiation therapy	95	17.9%
Adaptive planning	92	17.4%
Helical delivery therapy units (TomoTherapy, Halcyon, etc.)	55	10.4%
HDR brachytherapy afterloader	41	7.7%
MR-LINAC	40	7.5%
PET/CT	29	5.5%
Cone-beam CT	25	4.7%
Proton therapy	23	4.3%
Diagnostic services	22	4.2%
Gamma external beam therapy (GammaKnife, GammaPod, etc.)	11	2.1%
LDR services	11	2.1%
PET/MR	10	1.9%
Compact proton therapy	10	1.9%
Robotic therapy units (CyberKnife)	6	1.1%
IORT	4	0.8%
Cobalt-60 therapy	3	0.6%
Carbon ion therapy	2	0.4%

[a] 172 (32.5%) responded "None of the above"

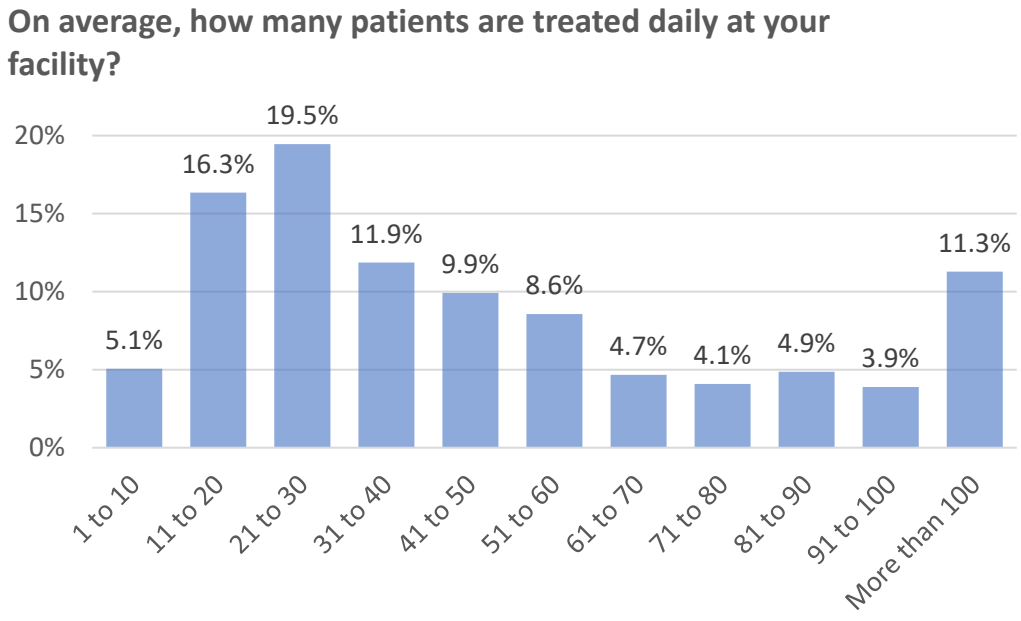


On average, how many patients are treated daily at your facility?

	N	Valid Percent	Cumulative Percent
1 to 10	26	5.1%	5.1%
11 to 20	84	16.3%	21.4%
21 to 30	100	19.5%	40.9%
31 to 40	61	11.9%	52.7%
41 to 50	51	9.9%	62.6%
51 to 60	44	8.6%	71.2%
61 to 70	24	4.7%	75.9%
71 to 80	21	4.1%	80.0%
81 to 90	25	4.9%	84.8%
91 to 100	20	3.9%	88.7%
More than 100	58	11.3%	100.0%
Total	**514**	**100.0%**	

Descriptive Statistics

Mean	**52.4** (*SD* = 40.1)
Percentiles	5th = 10.0, 25th = 25.0, 50th = 40.0, 75th = 70.0, 95th = 130.0

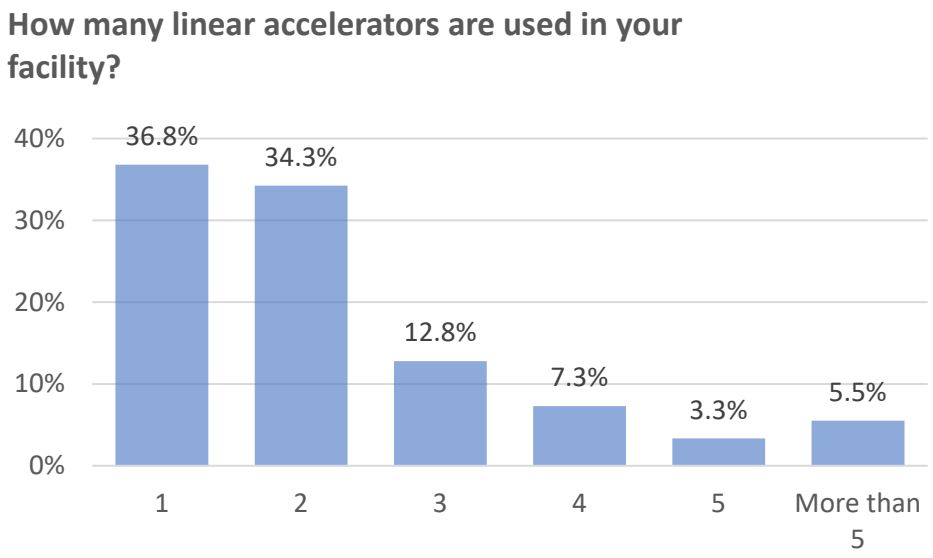


How many linear accelerators are used in your facility?

	N	Valid Percent	Cumulative Percent
1	187	36.8%	36.8%
2	174	34.3%	71.1%
3	65	12.8%	83.9%
4	37	7.3%	91.1%
5	17	3.3%	94.5%
More than 5	28	5.5%	100.0%
Total	**508**	**100.0%**	

Descriptive Statistics

Mean	**2.2** (*SD* = 1.5)
Percentiles	5th = 1.0, 25th = 1.0, 50th = 2.0, 75th = 3.0, 95th = 6.0

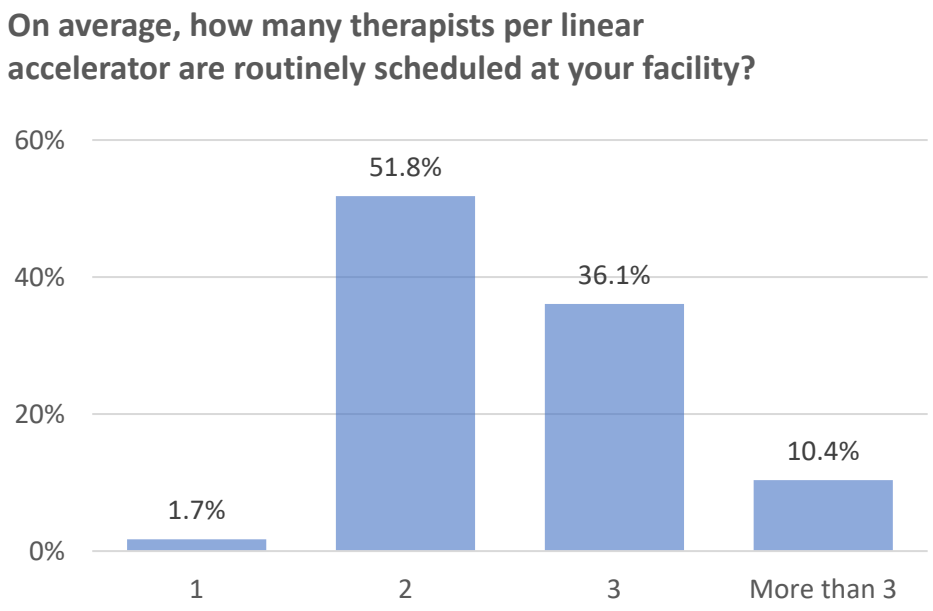


Personnel Demographics

On average, how many therapists per linear accelerator are routinely scheduled at your facility?

	N	Valid Percent	Cumulative Percent
1	9	1.7%	1.7%
2	270	51.8%	53.6%
3	188	36.1%	89.6%
More than 3	54	10.4%	100.0%
Total	**521**	**100.0%**	

Descriptive Statistics	
Mean	**2.5** (*SD* = 0.7)
Percentiles	5th = 2.0, 25th = 2.0, 50th = 2.0, 75th = 3.0, 95th = 4.0

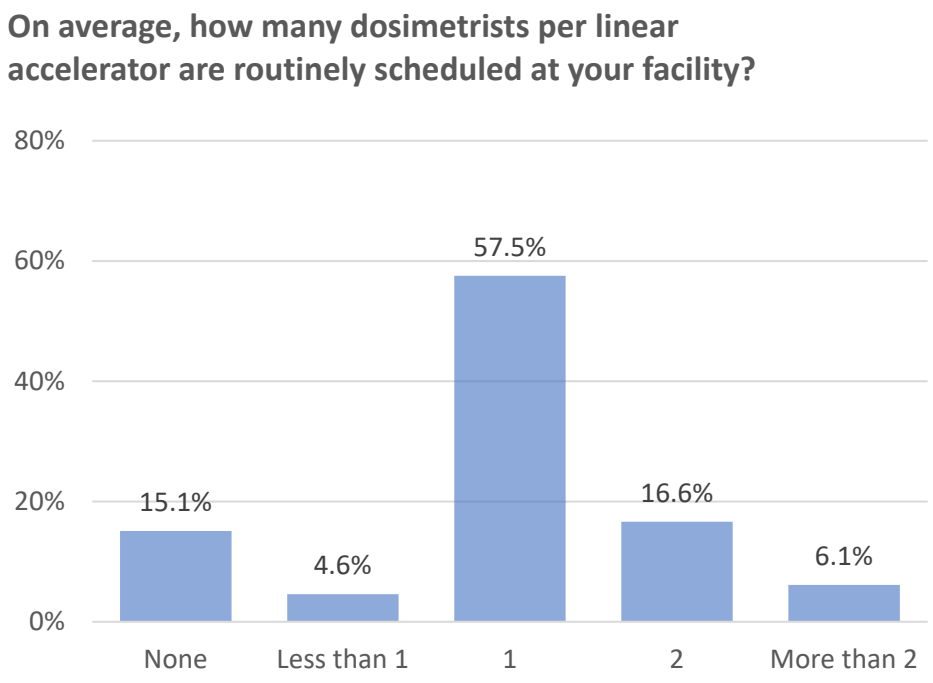


On average, how many dosimetrists per linear accelerator are routinely scheduled at your facility?

	N	Valid Percent	Cumulative Percent
None	69	15.1%	15.1%
Less than 1	21	4.6%	19.7%
1	263	57.5%	77.2%
2	76	16.6%	93.9%
More than 2	28	6.1%	100.0%
Total	**457**	**100.0%**	

Descriptive Statistics

Mean	**1.2** (*SD* = 1.1)
Percentiles	5th = 0.0, 25th = 1.0, 50th = 1.0, 75th = 1.0, 95th = 3.0

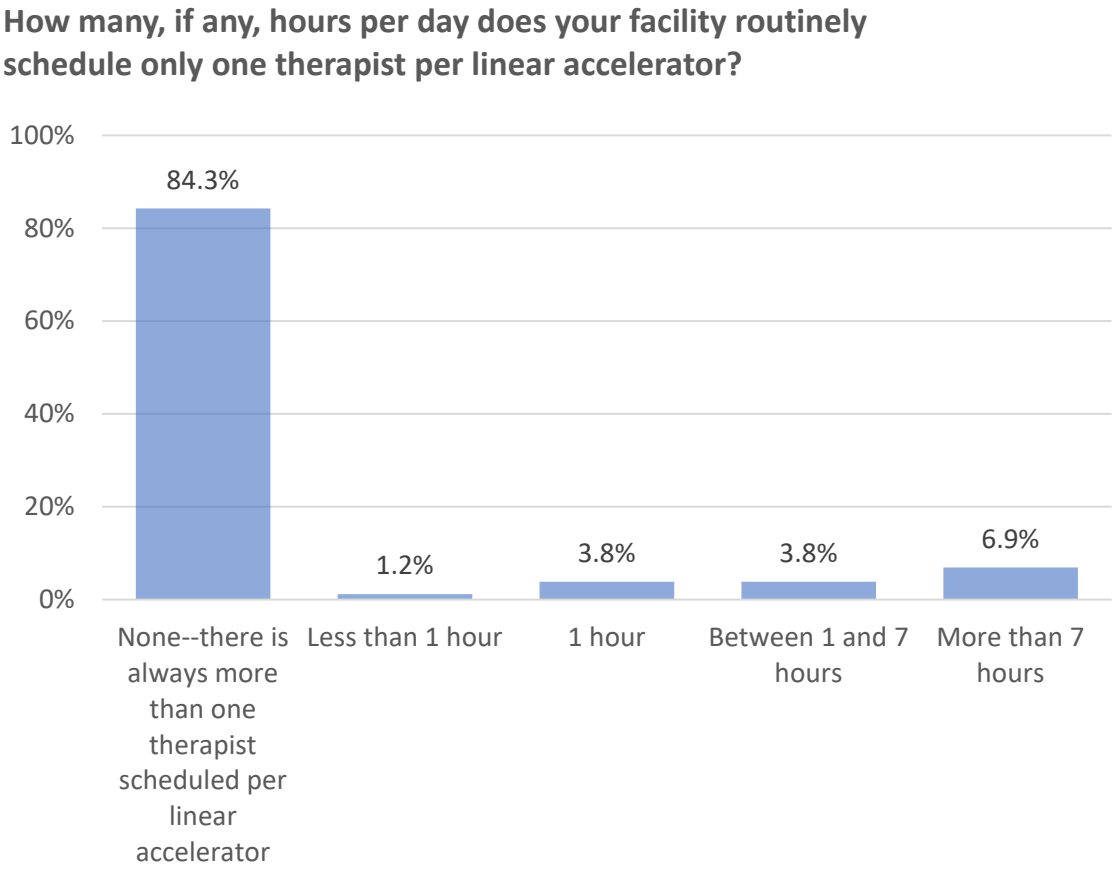


How many, if any, hours per day does your facility routinely schedule only one therapist per linear accelerator?

	N	Valid Percent	Cumulative Percent
None--there is always more than one therapist scheduled per linear accelerator	439	84.3%	84.3%
Less than 1 hour	6	1.2%	85.4%
1 hour	20	3.8%	89.3%
Between 1 and 7 hours	20	3.8%	93.1%
More than 7 hours	36	6.9%	100.0%
Total	**521**	**100.0%**	

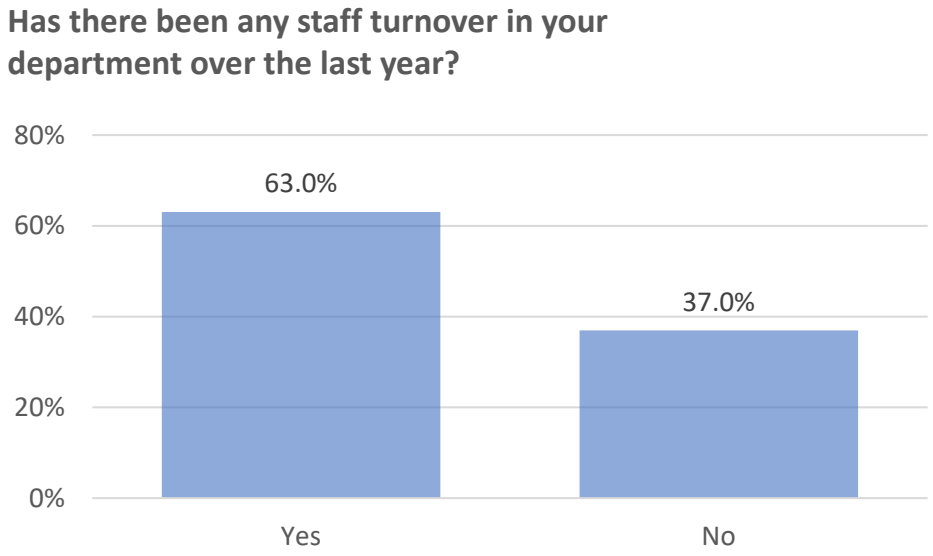
Descriptive Statistics

Mean	**0.8** (*SD* = 2.2)
Percentiles	5th = 0.0, 25th = 0.0, 50th = 0.0, 75th = 0.0, 95th = 8.0



Has there been any staff turnover in your department over the last year?

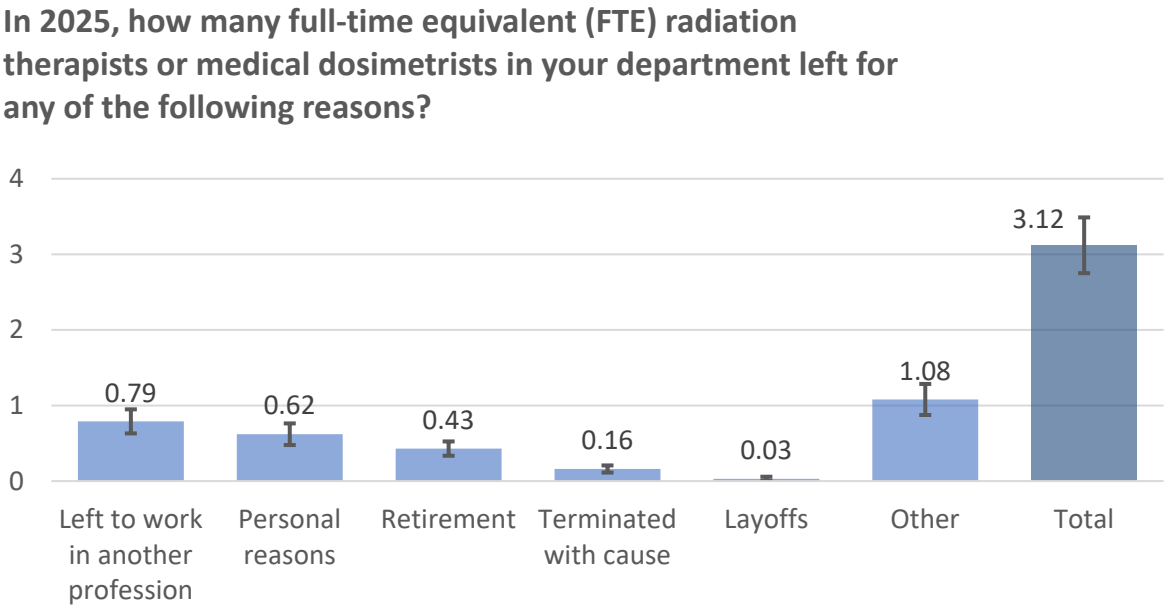
	N	Valid Percent
Yes	353	63.0%
No	207	37.0%
Total	**560**	**100.0%**



In 2025, how many full-time equivalent (FTE) radiation therapists or medical dosimetrists in your department left for any of the following reasons?

	N	Mean	*SD*	95% Confidence Interval
Left to work in another profession	332	0.79	1.48	± 0.16
Personal reasons	332	0.62	1.33	± 0.14
Retirement	332	0.43	0.88	± 0.09
Terminated with cause	332	0.16	0.44	± 0.04
Layoffs	332	0.03	0.26	± 0.03
Other	332	1.08	1.91	± 0.21
Total	**332**	**3.12**	**3.43**	**± 0.37**

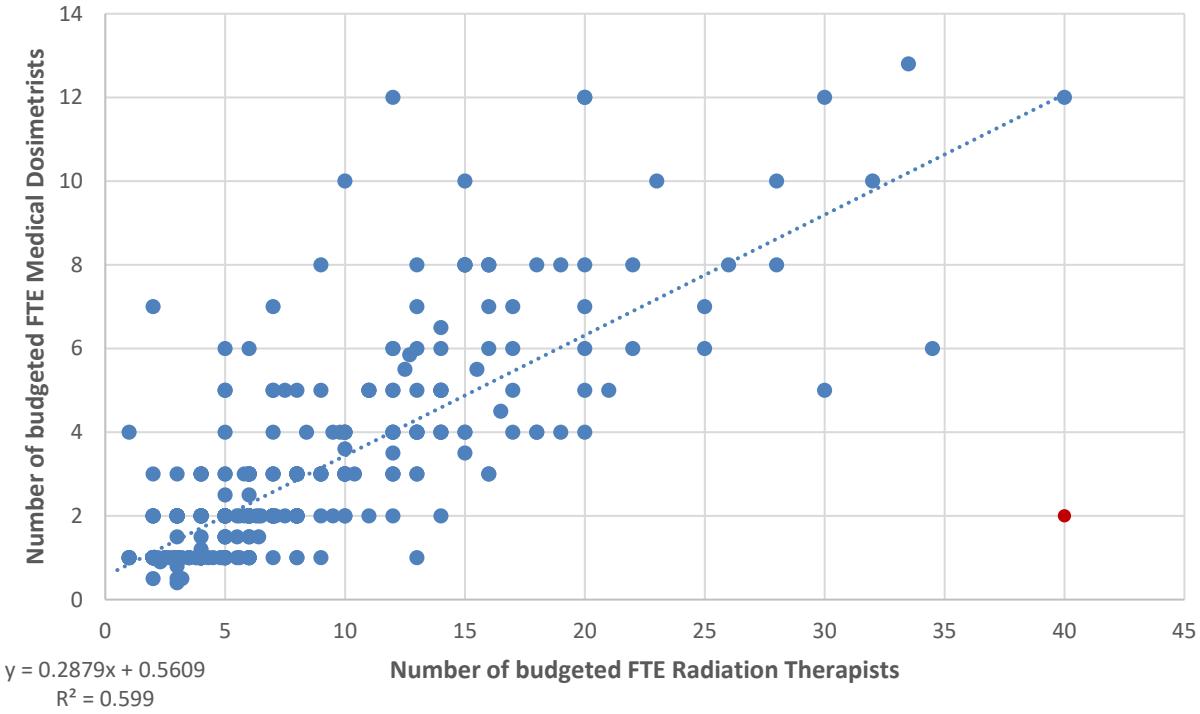
Note. Only respondents who indicated that their department had experienced turnover received this question, [N = 353]. Those who answered "yes" to the question regarding turnover but did not specify any amount of turnover were omitted from the calculations.



Appendix A. Scatterplots

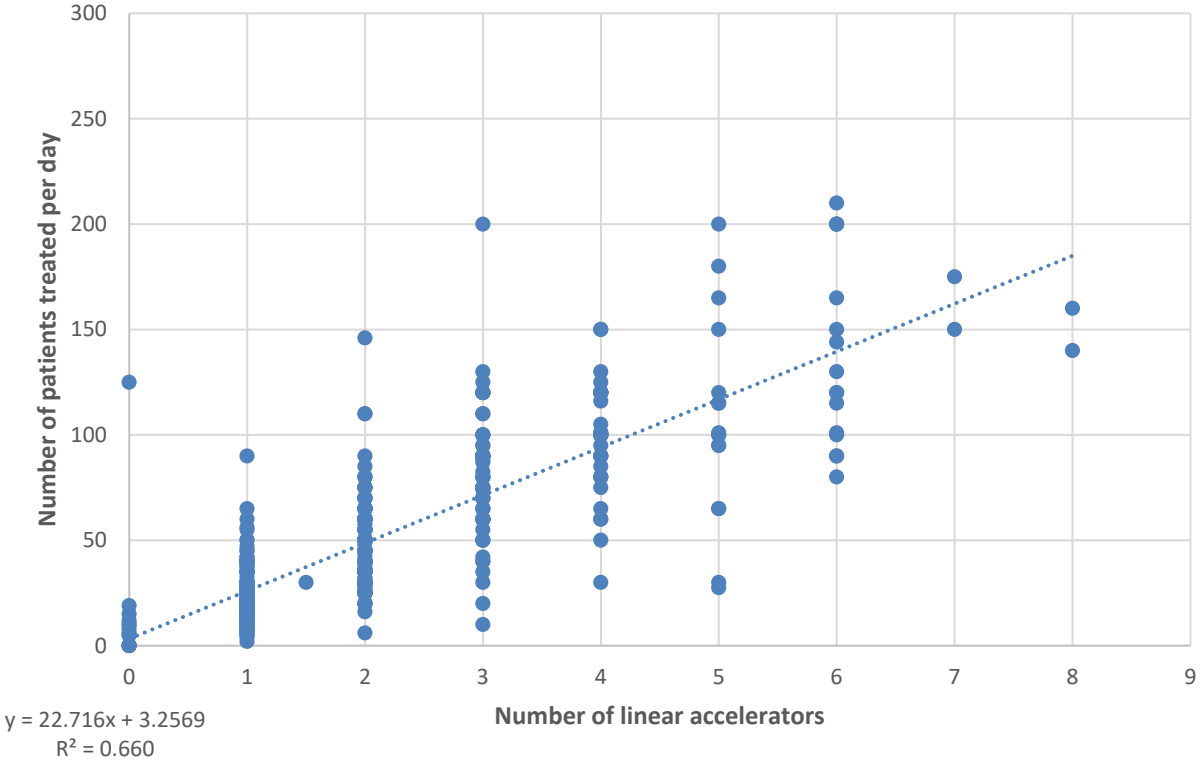
Below are scatterplots illustrating the observed relationships between selected survey variables. These plots do not imply causation; they simply show how the variables vary in relation to each other. In each chart, one variable is treated as independent (x-axis) and another as dependent (y-axis). Each point represents a facility observation. The diagonal line represents the best-fit regression line, with the corresponding equation displayed in the lower left-hand corner. R^2 indicates the proportion of variance in the dependent variable explained by the regression line: values closer to 1 indicate a better fit, while values closer to 0 indicate a poorer fit.

Number of budgeted FTE medical dosimetrists per facility by number of budgeted FTE radiation therapists per facility



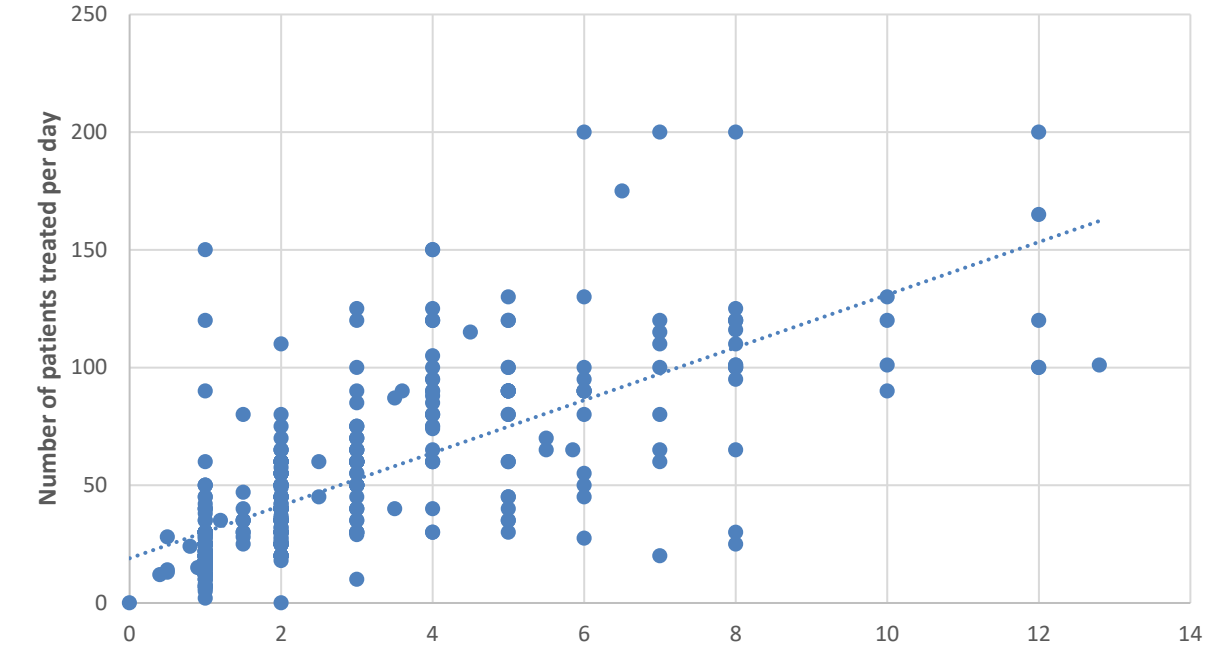
Note. The red point in the scatter plot appears as an outlier and was confirmed to be statistically influential (Cook's D = 1.92). A sensitivity analysis showed that its exclusion resulted in a modest increase in model fit (R^2 = 0.599 vs. 0.650) and slope (B = 0.288 vs. 0.310), suggesting that the observation has a measurable but not substantive impact on overall interpretation. Therefore, the data point was retained in the analysis.

Number of patients treated per day by linear accelerators used at facility



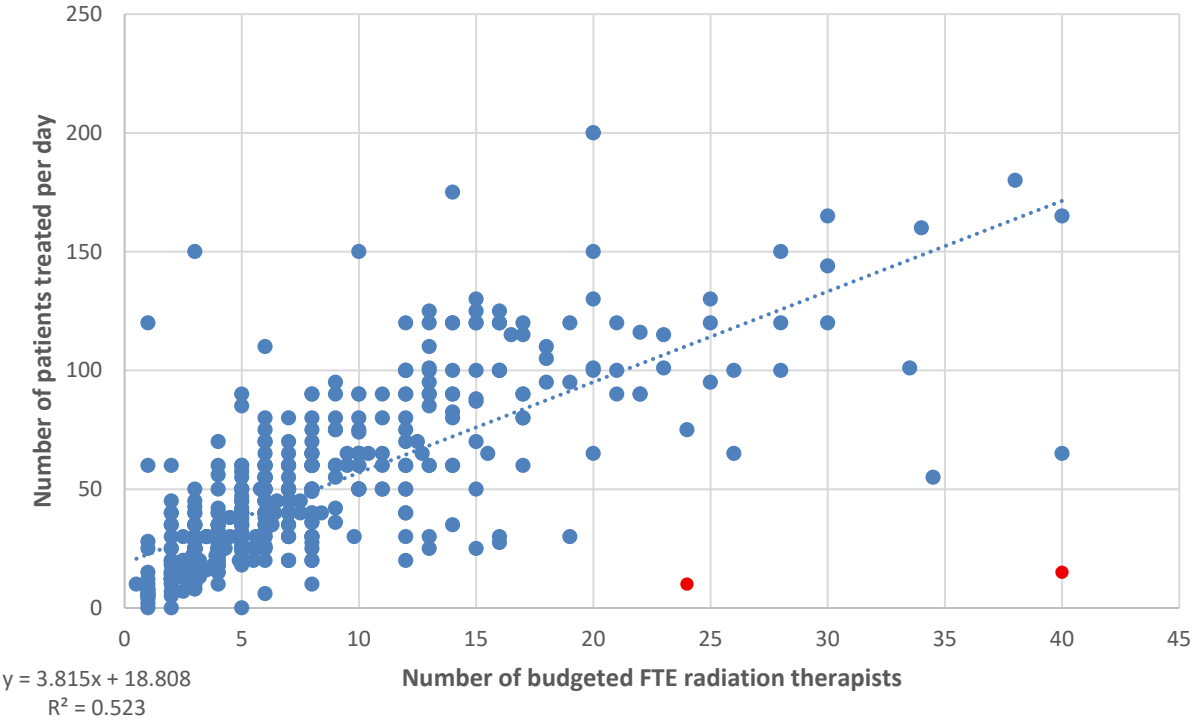
y = 22.716x + 3.2569
R^2 = 0.660

Number of patients treated per day by number of budgeted FTE medical dosimetrists



y = 11.196x + 18.978
R^2 = 0.520

Number of patients treated per day by number of budgeted FTE radiation therapists per facility



Note. The red points in the scatter plot appear as outliers and were confirmed to be statistically influential (Cook's D = 1.07). Sensitivity analysis showed that their exclusion resulted in a modest increase in model fit (R^2 = 0.523 vs. 0.563) and slope (B = 3.815 vs. 4.051, suggesting that the observation has a measurable but not substantive impact on overall interpretation. Therefore, the data point was retained in the analysis.