

Objectives

- Despite advances in oncoplastic breast surgery, there remains a barrier to breast reconstruction, particularly in rural and suburban areas
- We aimed to assess the geographical presence of plastic surgeons performing breast reconstruction relative to breast surgeons or general surgeons performing breast cancer surgery within urban, suburban, and rural populations

Methods

- A database investigation of the 2024 membership of the American Society of Breast Surgeons and American Society of Plastic Surgeons was performed
- The number of breast and plastic surgeons were totaled by state. Each breast surgeon’s zip code was searched for the presence of a plastic surgeon within 10 or 20 miles
- Zip codes were categorized into urban (>3000 people per square mile), suburban (1000-3000), or rural (<1000) by population density to determine the percentage of surgeons within each category
- An estimate of patients not having access to breast reconstruction was performed using the absolute difference in the number of breast surgeons to plastic surgeons and multiplying by a reasonable estimate of breast cancer patients seen per year (50 based on past research, with a range of 25 to 100)

Results

- There are **1.8 times** the number of plastic surgeons compared to breast surgeons (3,130 plastic surgeons and 1,753 breast surgeons)
- **14%** (252/1,753) of breast surgeons had no plastic surgeon within 10 miles; **7%** (123/1,753) had none within 20 miles
 - This is compared to 25% and 10% respectively in 2018
- When >20 miles away, the average distance of a plastic surgeon was 50 miles
- 43% of breast surgeons practice in urban areas, 32% in suburban, and 25% in rural areas
- 43% of plastic surgeons practice in urban areas, 38% in suburban, and 19% in rural areas

State	Total Number of Breast Surgeons	Total Number of Plastic Surgeons
AK	4	3
AL	20	44
AR	10	10
AZ	45	75
CA	142	426
CO	26	49
CT	30	63
DE	6	16
FL	115	266
GA	51	112
HI	8	13
IA	13	16
ID	10	16
IL	59	125
IN	25	55
KS	15	37
KY	8	39
LA	20	48
MA	48	72
MD	32	81
ME	6	10
MI	46	86
MN	27	51
MO	27	44
MS	10	31
MT	6	9
NC	69	99
ND	5	7
NE	11	17
NH	9	14
NJ	62	119
NM	11	10
NV	7	28
NY	147	193
OH	82	114
OK	16	16
OR	31	32
PA	98	125
RI	9	8
SC	29	45
SD	6	7
TN	44	51
TX	134	209
UT	12	31
VA	59	97
VT	6	3
WA	40	44
WI	42	47
WV	13	16
WY	2	1

Table 1. The total number of breast and plastic surgeons per state in the United States

Results

- **12,600** breast cancer patients do not have access to breast reconstruction, presuming each surgeon performs 50 breast cancer operations yearly
- Assuming a range for the absolute number of patients seen annually by breast surgeons to be 25 to 100, the number of breast cancer patients not receiving the option for breast reconstruction would be 6,300 to 25,200 patients annually.

	Urban	Suburban	Rural
Breast Surgeons	43%	32%	25%
Plastic Surgeons	43%	38%	19%

Table 2. The percentage of breast and plastic surgeons practicing by different community type

Conclusions

- While access to breast reconstruction continues to improve, there are still disparities in rural areas
- Efforts directed towards improving access to breast reconstruction in more rural areas should be pursued

References

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