

# Radiation oncology



## 2016 Factsheet

Radiation oncology is a specialty dealing with rapidly changing technological advances directed largely at improving the accuracy and effectiveness of radiotherapy outcomes, including better control and cure of tumours, as well as reduction of side effects. Increasing use of high quality imaging to direct radiotherapy, and newer types of radiation (such as protons) and evolving delivery techniques, such as intensity modulated radiotherapy (IMRT), are quickly becoming standard treatment methods.

A minimum of five years full-time advanced training through the Royal Australian and New Zealand College of Radiologists is required to specialise in this area.

### Workforce

In 2016, there were 345 radiation oncologists employed in Australia, of whom 25.8% worked in the private sector. Over 95% of radiation oncologists who completed the 2016 National Health Workforce Survey indicated they were clinicians.



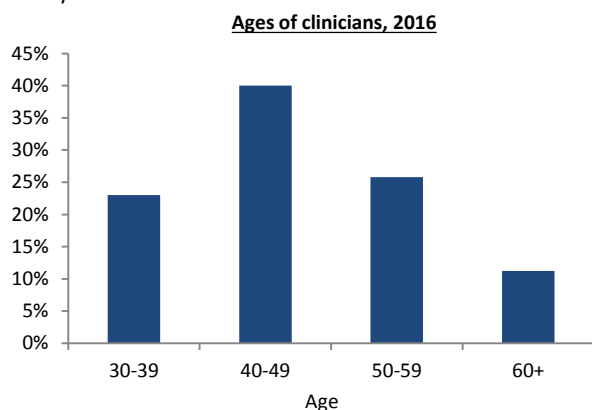
\* Includes administrators, educators, teachers and roles reported by survey respondents that did not fit predefined survey categories.

### Demographics of clinicians

Males represented 59.1% of clinicians in 2016 and had an average age of 48.9 years. Females represented 40.9% of clinicians and were on average 4.2 years younger than male clinicians.

Category	% of clinicians	Average age	Average hours per week
Male	59.1%	48.9	45.3
Female	40.9%	44.7	39.7
<b>Clinician total</b>	<b>100.0%</b>	<b>47.2</b>	<b>43</b>

40% of clinicians were aged 40-49 years and 25.8% were aged 50-59 years.



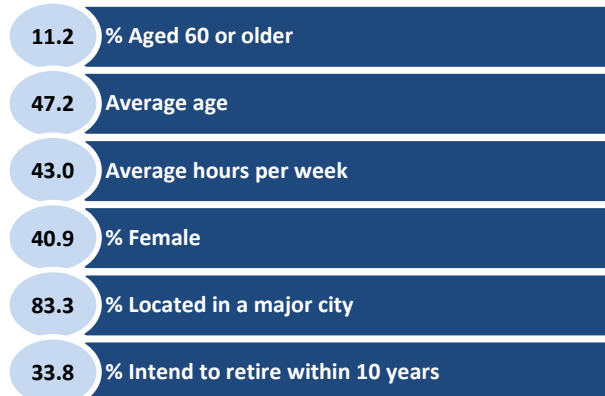
### Distribution of clinicians

In 2016, most clinicians (83.3%) were located in a major city or a location considered as MMM1 under the Modified Monash Model classification system.

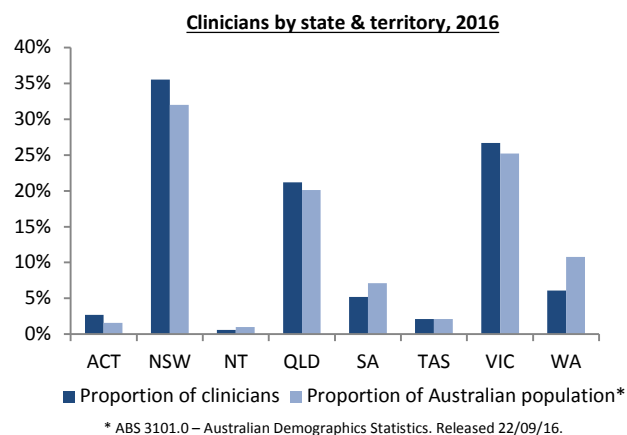
Location of clinicians by remoteness, Modified Monash Model (MMM*)							
MMM category	1	2	3	4	5	6	7
%	83.3	10.9	5.8	-	-	-	-

\* Further information on the Modified Monash Model is available at [doctorconnect.gov.au](http://doctorconnect.gov.au)

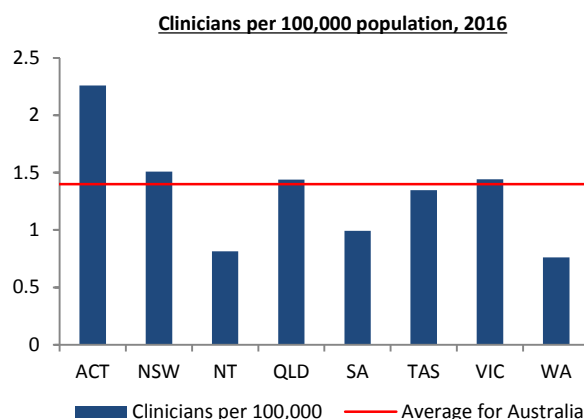
### Quick facts of clinician workforce



Over 35% of clinicians indicated their principal place of practice was in New South Wales and over 26% indicated it was in Victoria.



The Australian Capital Territory had the highest ratio of clinicians in 2016 with 2.3 per 100,000 population. By contrast, the Northern Territory and Western Australia had the lowest ratio, both with 0.8 per 100,000 population.



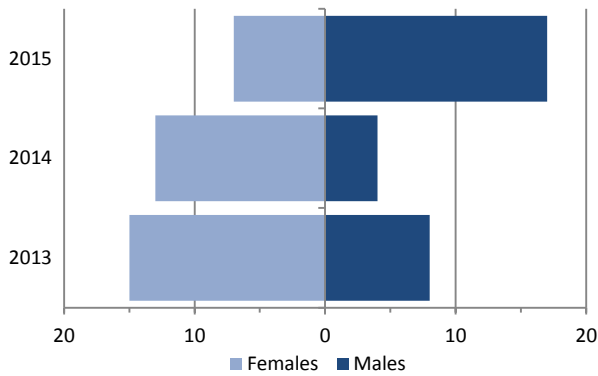
### New fellows

The overall number of radiation oncology new fellows increased slightly by 4.3%. Overseas trained new fellows who obtained their specialist qualification outside of Australia remained steady during this period.

Number of new fellows, 2013-15			
	2013	2014	2015
Trained in Australia	20	14	21
Overseas trained	3	3	3
<b>Total</b>	<b>23</b>	<b>17</b>	<b>24</b>

Between 2013 and 2015, the number of female new fellows decreased 53.3%. By contrast, male new fellows increased 112.5%.

**New fellows by gender, 2013-15**



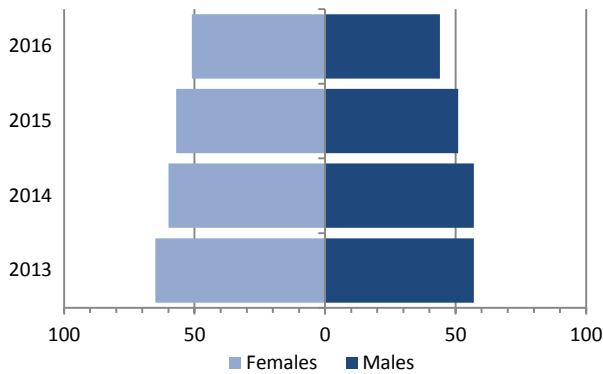
### Vocational training

The number of radiation oncologists decreased by 22.1% between 2013 and 2016.

**Trainee numbers, 2013-16**

Year	Females	Males	Total
2013	65	57	122
2014	60	57	117
2015	57	51	108
2016	51	44	95
<b>Change 2013-16 (%)</b>	<b>-21.5%</b>	<b>-22.8%</b>	<b>-22.1%</b>

**Vocational trainees, 2013-16**

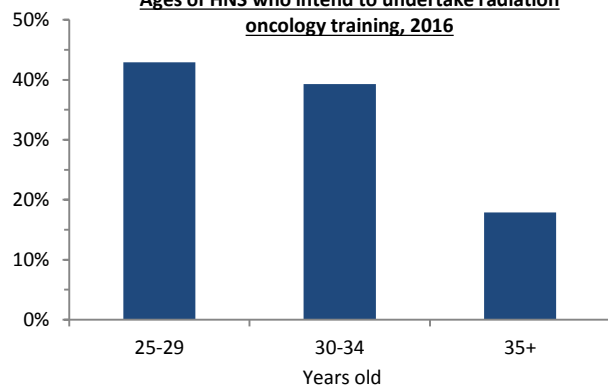


### Vocational intentions

In 2016, there were 28 Hospital Non-Specialists (HNS\*) who indicated their intention to undertake vocational training in radiation oncology.

\* A HNS is a medical practitioner employed in a salaried position mainly in a hospital. They do not hold a specialist qualification and are not training to obtain one. They include career medical officers, hospital medical officers, interns, principal house officers, resident medical officers and registrars.

**Ages of HNS who intend to undertake radiation oncology training, 2016**



### Workforce dynamics indicator\*

The workforce dynamics indicator highlights areas of concern in the future. The indicators measured and their current status is highlighted in the table below.

**Note:** The workforce dynamics indicators are for workforce assessment purposes only and are not intended to guide future training numbers.

\* Further information on the workforce dynamics Indicator is available at [health.gov.au](http://health.gov.au)

Minimal concern Significant concern

Indicator	Description	Status
<b>Ageing of workforce</b>	Workforces with higher average ages are more susceptible to higher exit rates due to retirements.	
<b>Replacement rate</b>	This measure indicates whether trainee numbers are sufficient to replace the numbers leaving the workforce.	
<b>Reliance on Overseas Trained Specialists (OTS)</b>	Workforces with high proportions of OTS are of concern because they depend on a supply stream affected by immigration policies that change.	
<b>Duration of training program</b>	This measure indicates how long it takes to train a replacement workforce.	

#### References

- 1) National Health Workforce Dataset (NHWDS): Medical Practitioners 2016.
- 2) Australian Medical Association (AMA) Career Pathways Guide.
- 3) Medical Education and Training Report 1<sup>st</sup> edition (Unpublished).
- 4) ABS 3101.0 – Australian Demographics Statistics. Released 22/09/16.
- 5) National Medical Training Advisory Network (NMTAN) – Prevocational Doctor Factsheet Methodology Paper

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