



# Fact File

The Royal College of Pathologists of Australasia

**Australian Pathologist Workforce 2018  
Immunopathology**

## AUSTRALIAN PATHOLOGIST WORKFORCE – IMMUNOPATHOLOGY

### Overview

Immunopathology is a specialty, like haematology, which often involves both laboratory medicine (the testing of specimens collected from patients) and clinical practice (interviewing, examining and advising patients about their clinical problems).

In the laboratory, Immunopathologists are involved in the design, performance and supervision of tests relating to the immune system. These include, for example, testing for "allergy antibodies" (IgE) to determine whether patients have allergies to various substances, the measurement of different classes of antibody proteins to determine the state of the immune system's defence mechanisms, or monitoring the level of T-lymphocytes, the cells that disappear with HIV infection.

Clinical activities of an Immunopathologist include providing advice on a wide variety of other disorders including immunodeficiencies. They may also be directly involved in managing patients with autoimmune diseases and AIDS.

### Workforce profile and trends

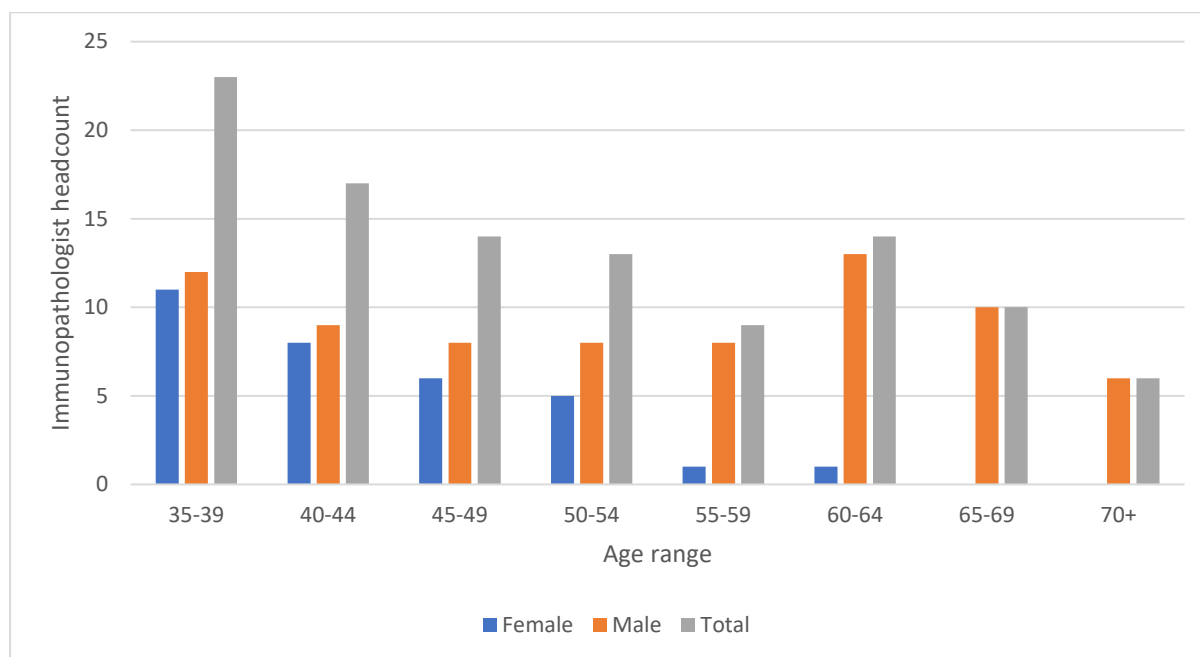
In 2016, the Immunopathologist workforce was the fourth largest discipline, representing 5.5% of the total Australian Pathologist workforce (a decline from 5.9% in 2011). The discipline experienced low growth per annum of 2.3% between 2011 and 2016, increasing from 95 to 106 practitioners over the period (Table 13).

Table 1: Immunopathologist Workforce, 2016, Age and Sex Profile

Age Group	Headcount			Percentage	Percentage
	Female	Male	Total	by Age	Female by Age
30-34	0	0	0	0.0%	0.0%
35-39	11	12	23	21.7%	47.8%
40-44	8	9	17	16.0%	47.1%
45-49	6	8	14	13.2%	42.9%
50-54	5	8	13	12.3%	38.5%
55-59	1	8	9	8.5%	11.1%
60-64	1	13	14	13.2%	7.1%
65-69	0	10	10	9.4%	0.0%
70+	0	6	6	5.7%	0.0%
<b>Total</b>	<b>32</b>	<b>74</b>	<b>106</b>	<b>100.0%</b>	<b>30.2%</b>
<b>55 years and older</b>	<b>2</b>	<b>37</b>	<b>39</b>		
<b>% 55 years and older</b>	<b>6.3%</b>	<b>50.0%</b>	<b>36.8%</b>		

Source: RCPA data base, 2016

Figure 1: Immunopathologist Workforce, 2016, Age and Sex Profile

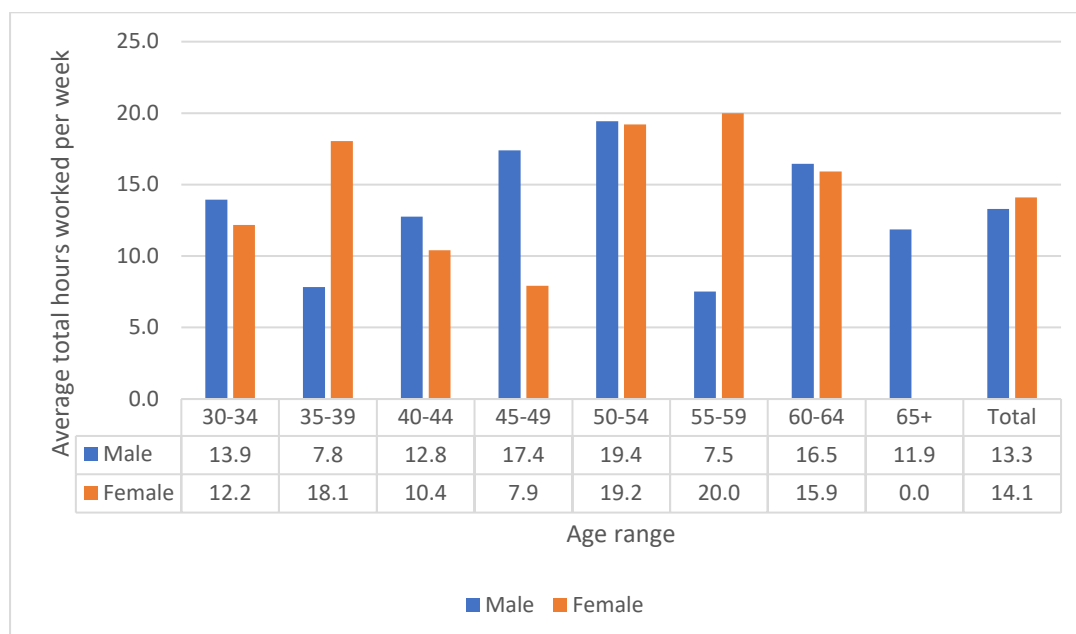


Source: RCPA data base, 2016

Table 2 and Figure 1 show that the modal age range for the workforce is relatively young at 35 to 39 years, although there are no practitioners aged 30 to 34 years. The age group for the total Australian Pathologist workforce of 30 to 34 years is 3.9% of the total workforce so other disciplines have younger workforce members. The modal age range for the female workforce is 35 to 39 years, and for the male workforce is 60 to 64 years. The workforce also has a large majority of males, at 69.8% overall. Females are in the minority in each age cohort, although 47.8% of all females are in the 35 to 39 year age group.

Over one third of the workforce is older than 55 years (36.8%), with 6.3% of females in this age range, and half of males (50.0%). This profile has significant implications for the retirement of a large proportion of the workforce in the next ten years. Furthermore, 15.1% of the workforce is aged 65 years and older, so that 16 Immunopathologists nationally will retire in a much shorter time frame.

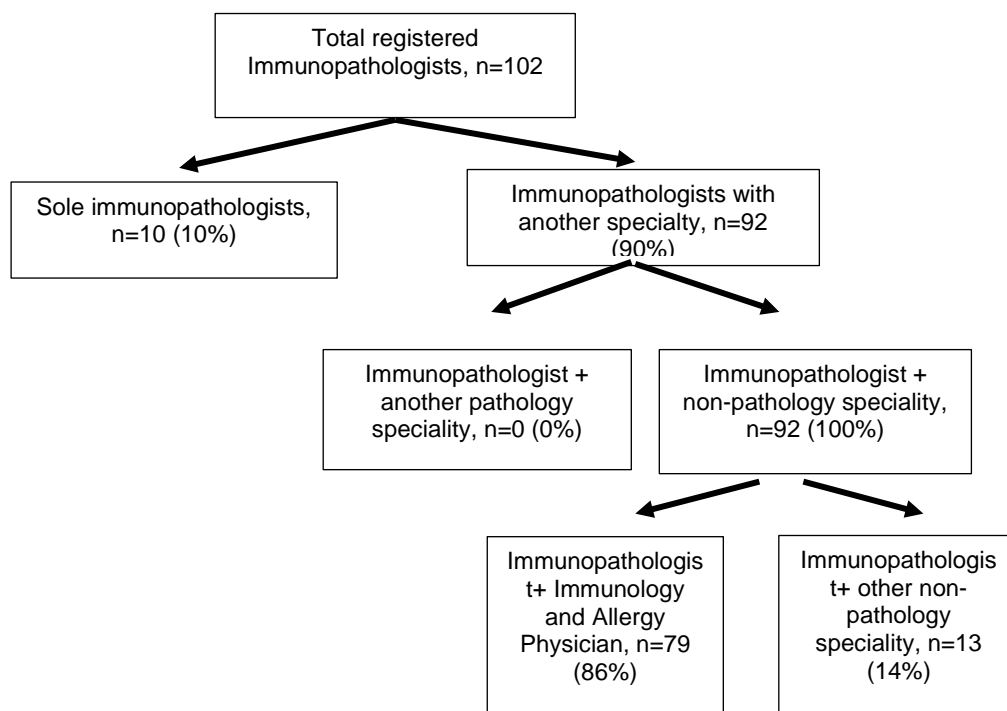
Figure 2: Immunopathologist Workforce, 2016, Average Hours Worked by Age and Sex



Source: DoH Data Set, 2016

Immunopathology is another discipline with joint training pathways, and therefore has a fractional profile in relation to the Pathologist role. As with Haematologists, the discipline shows very low average hours worked for both males and females. Overall, females show higher total hours worked per week in the Pathology discipline (14.1 hours in total on average per week), compared to males (13.3 hours). There is great variability in total average hours worked per week by age and gender. Males work on average higher hours per week for all age groups apart from those aged 35 to 39 years and 55 to 59 years, where females work longer hours.

Figure 3: Immunopathologist single and multiple specialty profile, 2016



Source: DoH Data Set, 2016

According to 2016 DoH Workforce data sourced from APHRA, there were 102 registered Immunopathologists working in Australia (Figure 3). This is slightly lower than the 106 Immunopathologists reported as working in Australia in the RCPA data base. Of these pathologists, only ten (ten percent) specialise solely in Immunopathology and the very large majority of 92 (90%) work in another speciality as well. Of the 92 Immunopathologists working in two specialities, all work in a non-pathology speciality as their second speciality. The most common second speciality, as expected, was as a Physician in Immunology and Allergy, indicating the strong clinical role of Immunopathologists. They accounted for 79 practitioners or 77.5% of the total workforce and 86% of those indicating a non-pathology speciality as their second speciality.

### Trends in trainee numbers

Immunopathologist trainees did not show any overall growth in numbers over the period 2011 to 2016 with 23 trainees in both 2011 and 2016. However, numbers did grow to as high as thirty in 2012.

### Workforce demand and supply

To place Immunopathology in context, most state providers have one Immunopathology lab, other than NSW. There are no private Immunopathology providers in some states. One large corporate provider employs 3 FTE Immunopathologists nationally. It was advised that the College is producing new fellows in reasonable numbers but they are not working in immunopathology jobs and need a back-up interest i.e. clinical role in areas such as allergy, autoimmune responses.

The value add role, where it occurs, was seen as a medium to high driver of demand. Population change, precision medicine and complexity of testing were seen as medium drivers of demand. However, while the volume of tests is increasing this may not translate into increasing demand for the

workforce. Complexity of testing will continue, and tests will be more difficult to interpret, therefore there will be a greater role in post-test interpretation.

Consolidation and increased efficiency has reduced workforce demand, as has technology and automation.

Increasing demand for workforce is in relation to:

- Pre-testing to ensure clinicians are ordering the right test,
- Ensuring quality i.e. choosing appropriate tests and using results appropriately and ensuring that testing approaches and results are comparable to other labs and overseas (quality control).

Genetic testing was rated as 'only contributing' to low growth as the main patient groups consist of small populations with rare conditions such as celiac disease.

Precision medicine will result in growth in services and testing will become more complex.

In terms of supply, there was a view that the market was in over-supply, with only one to two providers per state, and there is currently minimal turnover as people are not retiring.

### ***Modelling Implications***

The likely changes to the NPAAC supervision regulations was identified as having an impact on Immunopathology. As a result, it was decided to adjust the base workforce size upwards by five percent to allow for this one-off adjustment, but to take into account the current view of an oversupply of this workforce.

Table 2: Demand drivers for Immunopathologists

<b>Indicator</b>	<b>2011</b>	<b>2016</b>	<b>ACGR</b>
<b>High Scenario:</b> Immunology MBS Service Items	2,989,457	4,082,340	6.4%
<b>Low Scenario:</b> Workforce Size (Headcount)	95	106	2.2%

Source: Retrieved from: [http://medicarestatistics.humanservices.gov.au/statistics/mbs\\_item.jsp](http://medicarestatistics.humanservices.gov.au/statistics/mbs_item.jsp)

Note: Annual Compound Growth Rate (ACGR)

The High Scenario Demand Growth based on MBS growth was 6.4%. The Low Scenario Demand Growth based on Workforce Growth used was 2.2%

### Results of projection modelling

Figure 4: Results of Projection Modelling for Immunopathologist Workforce, High Scenario (Service Demand)

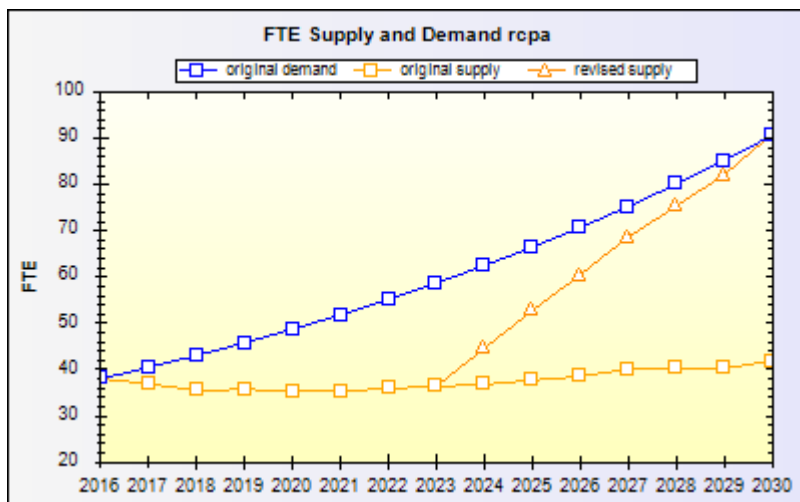


Figure 5: Results of Projection Modelling for Immunopathologist Workforce, Low Scenario (Workforce Demand)

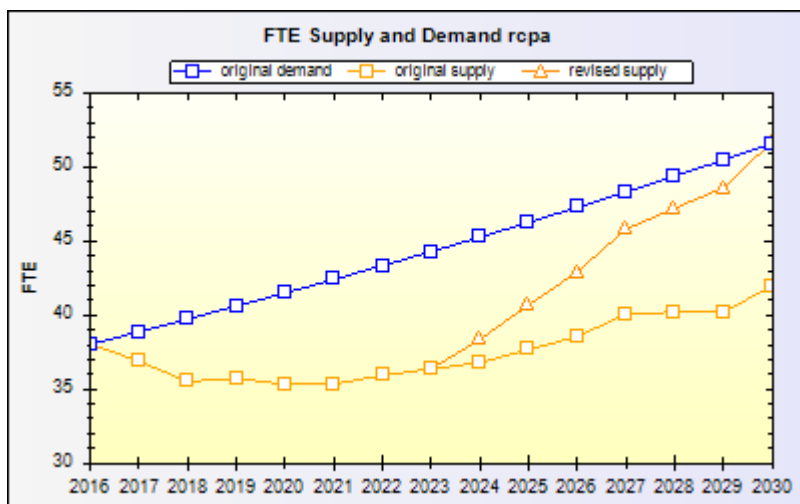


Table 3: Results of Workforce Modelling for Immunopathologist Workforce

	Trainees				
	Base Year	Low Scenario	High Scenario	Gap Low Scenario	Gap High Scenario
	2016	2030	2030	2030	2030
<b>Immunopathology</b>	6	11	35	5	29
<b>Total six disciplines</b>	<b>97</b>	<b>151</b>	<b>238</b>	<b>54</b>	<b>141</b>
<b>Total Australian Workforce</b>	<b>100</b>	<b>170</b>	<b>192</b>	<b>70</b>	<b>92</b>
	New Fellows				
<b>Immunopathology</b>	5	10	31	5	26
<b>Total six disciplines</b>	<b>87</b>	<b>138</b>	<b>213</b>	<b>51</b>	<b>126</b>
<b>Total Australian Workforce</b>	<b>90</b>	<b>153</b>	<b>173</b>	<b>63</b>	<b>83</b>

The results of the projection modelling show that additional trainees were required under both scenarios, five additional trainees for the Low Scenario and 29 additional trainees for the High Scenario. This is a large number of additional trainees for the output of the High Scenario service demand growth estimate, of 6.4% ACGR.

The age profile of the Immunopathologist workforce is relatively young with a modal age range of 35 to 39 years. At the same time there is 15.1% of the workforce aged 65 years and over. This shows that 16 practitioners will leave the workforce within the next five years. Therefore, the number of additional trainees needs to allow for this replacement as well as balance the view of the workforce that it is currently in oversupply.