

# Report on Eye and Tissue Donation in Australia

2015 Year End Report

Data collected from Australian Eye and Tissue Banks. This report supersedes any quarterly interim summaries previously released for 2015.

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# Explanatory notes

#### Acknowledgements

The following Eye and Tissue Banks contributed data:

#### NSW:

- Australian Biotechnologies
- Hunter New England Bone Bank
- Lions NSW Eye Bank
- NSW Bone Bank
- Rachel Forster Bone Bank
- Sydney Heart Valve Bank

#### QLD:

- QLD Eye Bank
- QLD Bone Bank
- QLD Heart Valve Bank

#### $\mathbf{SA}$ :

- Eye Bank of SA
- SA Tissue Bank

#### VIC:

- Barwon Health Bone Bank Geelong
- Donor and Tissue Bank Victoria
- Lions Eye Donation Service

#### WA:

- Lions Eye Bank of WA
- PlusLife (Perth Bone and Tissue Bank)
- Royal Perth Heart Valve Bank

Special acknowledgement to the Biotherapeutics Association of Australasia (BAA) and the Eye Bank Association of Australia and New Zealand (EBAANZ) for their comments.





## Definitions

- 1 Cardiovascular tissue (cv) Includes, but not limited to, heart valves, pericardium and annexed vessels.
- 2 Cornea The cornea is the transparent anterior tissue of the eyeball consisting of many layers.
- 3 Deceased solid organ and tissue donation Identifies a donation event where one or more solid organs and tissues are retrieved from a deceased donor. Data has been crosschecked with the solid organ and tissue sector to ensure the donor has met the deceased solid organ and tissue donation criteria.
- 4 Deceased tissue donation Identifies a donation event where one or more tissues are retrieved from a deceased donor and can comprise of musculoskeletal, cardiovascular, skin or eye tissue.
- 5 Donation event
  - A single retrieval event, within a calendar day, where a living donor can donate one or more musculoskeletal or cardiovascular tissues.
  - Retrieval from deceased donors of solid organ, tissue and/or eyes that may occur on differing days but after the donor declaration of death date.
- 6 Eye only donor A deceased donor where eye only retrieval has taken place. A donor is counted as an eye only donor if 2 whole eyes, 2 corneas only, one eye or one cornea only is retrieved. Outcomes of donated eye tissue are not limited to transplantation.
- 7 Eye and solid organ (and tissue) donor A deceased donor where eye and solid organ retrieval has taken place. These donors may or may not have donated an additional tissue(s) e.g. musculoskeletal, cardiovascular or skin. Data has been crosschecked with the solid organ and tissue sector to confirm the donation event and donor classification.
- 8 Eye and tissue only donor A deceased donor where eye and an additional tissue(s) e.g. musculoskeletal, cardiovascular or skin has taken place. Data has been crosschecked with the tissue sector to confirm the donation event and donor classification.
- 9 Eye tissue donation Unless otherwise specified all donors undergo retrieval of both whole eyes or both corneas. This means the number of eye tissue donations can be calculated by doubling the amount of total eye donors.
- 10 Eye tissue graft transplants Corneal or scleral tissue transplanted into an eye tissue recipient within the reporting time period.
- 11 Eye tissue recipient Unless otherwise specified the number of eye tissue recipients is equal to the number of eye tissue graft transplants (consistent with EBAANZ).
- 12 Living tissue donation Identifies a donation event where one or more tissues are retrieved from a living donor. Living tissue is vastly comprised of donated femoral heads (bone) retrieved during hip replacement surgery. A living musculoskeletal donor can donate one femoral head during one donation event, two femoral heads during one donation event or one femoral head during two separate donation events.
- 13 Musculoskeletal tissue (ms) Includes, but not limited to, bone, cartilage and tendon retrieved from areas such as the pelvis, arm and leg.
- 14 Notified tissue graft transplants Number of tissue grafts supplied and confirmed by the hospital to the distributing tissue bank to have been transplanted. One tissue graft recipient may receive multiple graft transplants.
- 15 Notified tissue graft recipients The number of tissue graft recipients, confirmed by the hospital to the distributing bank, who receive one or more graft transplants during a single tissue transplant event.
- 16 Pancreas islet (pi) a multicellular structure within the pancreas that maintains normal blood glucose level within the body.
- 17 Sclera unit A unit of the protective outer layer of the eyeball, used for transplantation during ocular surgery.
- 18 Skin tissue (sk) Includes, but not limited to, split thickness skin (epidermis and upper part of the dermis), of varying size.





- 19 Tissue transplant event
  - A single tissue transplant event occurs when a tissue graft recipient receives 1 or more tissue grafts on a single occasion. This will be counted as one tissue graft recipient, one tissue transplant event.
  - If a tissue graft recipient receives 1 or more tissue grafts during multiple tissue transplant events, this will be counted as one tissue graft recipient *for each tissue transplant event*.
- 20 Unique donor A deceased or living donor who donates one or more tissue(s) during a single donation event.

#### Counting Methodology

Each tissue and eye bank uses a Minimum Data Set Template (MDS) to provide ANZOD de-identified donor information for each tissue type, as well as aggregate data for reporting of notified tissue graft transplants and notified tissue graft recipients.

Data received undergoes reconciliation and cross checking between the solid organ sector (ANZOD), the eye sector (participating eye banks) and the tissue sector (participating tissue banks) to ensure accuracy at the time of reporting.

#### Notes

According to EBAANZ, since the end of 2011, the number of corneal transplants in Australia each year has exceeded the number of new patients requiring transplants each year. This means the current demand for corneal transplants in Australia is being met and should be noted when comparing 2015 corneal transplantation numbers to previous years published.

It is acknowledged that service provision in the living tissue donation sector by BAA and associated member banks occurs in addition to the Australian Organ and Tissue Authority's (OTA) "national reform programme to improve organ and tissue donation and transplantation outcomes in Australia".

ANZOD declares:

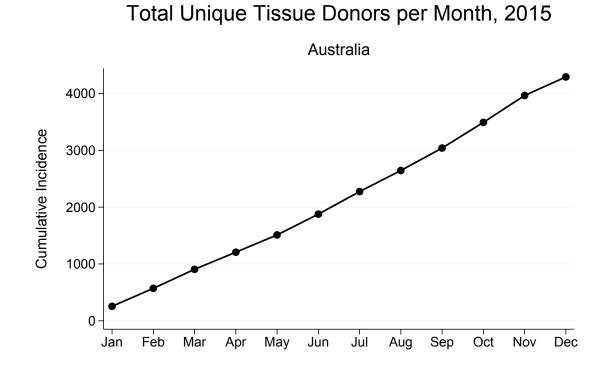
- All donations of eye tissue have come from deceased donors.
- Eye donors include those who have donated 2 whole eyes, 2 corneas or one whole eye or one cornea.
- Eye donations are not limited to the outcome of transplantation.
- Eye and Tissue Graft Transplants and Transplant Recipient data includes transplant events that have occurred in a different jurisdiction to where the tissue was donated.
- Graft Transplants and Transplant Recipient data may or may not be a direct outcome of tissue donations reported for the quarter, as tissue can be stored for a period of time before the graft is transplanted.
- Outcome data does not capture tissue that has been supplied for transplant but not yet notified as transplanted to the distributing tissue bank.





# Tissue Donors, Donation, Implantation and Recipients

Unique Tissue Donors (ms, cv, sk, pi)



Total Unique Tissue Donors by Jurisdiction of Retrieval and Month, 2015

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
QLD	68	65	88	84	84	69	90	71	73	106	81	51	930
NSW	77	125	104	99	94	117	145	143	156	181	207	136	1584
ACT	1	0	0	0	0	0	0	0	0	0	0	0	1
VIC	53	54	66	56	59	71	56	60	71	77	56	44	<b>723</b>
TAS	4	3	4	0	5	3	2	2	9	9	8	3	<b>52</b>
$\mathbf{SA}$	18	16	11	12	29	49	57	55	36	31	53	40	407
WA	34	53	62	50	33	57	47	40	50	48	68	53	595
NT	0	0	0	0	0	0	0	0	0	0	0	0	0
AUSTRALIA	255	316	335	301	304	366	397	<b>371</b>	395	452	473	327	4292





	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
QLD	54	58	73	71	71	60	74	65	61	92	71	44	794
NSW	68	121	102	92	85	108	132	134	146	172	201	129	1490
ACT	0	0	0	0	0	0	0	0	0	0	0	0	0
VIC	44	48	53	50	54	56	50	52	63	70	45	35	<b>620</b>
TAS	4	3	4	0	5	3	2	1	9	8	$\overline{7}$	3	<b>49</b>
SA	18	16	10	12	29	46	56	55	36	31	49	38	396
WA	32	53	61	50	32	55	45	39	46	48	67	51	<b>579</b>
NT	0	0	0	0	0	0	0	0	0	0	0	0	0
AUSTRALIA	<b>220</b>	299	303	<b>275</b>	<b>276</b>	328	359	346	361	421	440	300	3928

#### Living Unique Tissue Donors by Jurisdiction of Retrieval and Month, 2015

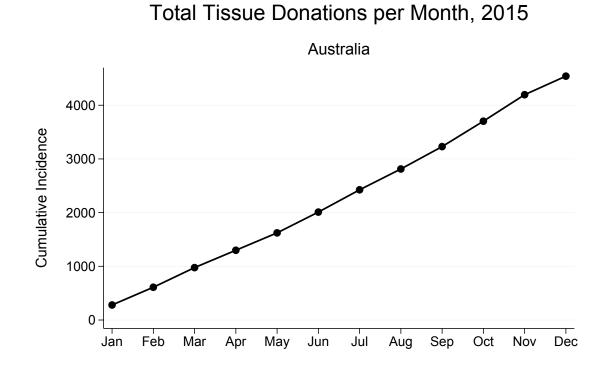
#### Deceased Unique Tissue Donors by Jurisdiction of Retrieval and Month, 2015

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	$\operatorname{Sep}$	Oct	Nov	Dec	Total
QLD	14	7	15	13	13	9	16	6	12	14	10	7	136
NSW	9	4	2	$\overline{7}$	9	9	13	9	10	9	6	$\overline{7}$	94
ACT	1	0	0	0	0	0	0	0	0	0	0	0	1
VIC	9	6	13	6	5	15	6	8	8	7	11	9	103
TAS	0	0	0	0	0	0	0	1	0	1	1	0	3
SA	0	0	1	0	0	3	1	0	0	0	4	2	11
WA	2	0	1	0	1	2	2	1	4	0	1	2	16
$\mathbf{NT}$	0	0	0	0	0	0	0	0	0	0	0	0	0
AUSTRALIA	<b>35</b>	17	<b>32</b>	26	<b>28</b>	38	38	<b>25</b>	<b>34</b>	<b>31</b>	33	<b>27</b>	364





## Tissue Donations (ms, cv, sk, pi)



Total Tissue Donations by Jurisdiction of Retrieval and Month, 2015

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
QLD	82	70	104	99	90	78	98	78	85	116	90	59	1049
NSW	80	130	106	102	98	118	150	150	157	185	208	137	1621
ACT	1	0	0	0	0	0	0	0	0	0	0	0	1
VIC	60	58	79	59	67	80	57	62	78	84	64	53	801
TAS	5	3	4	0	5	3	2	3	10	9	8	3	<b>55</b>
SA	18	16	11	12	29	49	57	55	36	31	54	40	408
WA	34	53	62	51	35	59	51	40	51	48	69	54	607
NT	0	0	0	0	0	0	0	0	0	0	0	0	0
AUSTRALIA	<b>280</b>	330	366	323	<b>324</b>	387	415	388	417	473	493	346	4542





	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
QLD	54	59	76	73	72	60	74	66	62	94	71	47	808
NSW	70	125	102	93	86	109	134	137	147	175	201	130	1509
ACT	0	0	0	0	0	0	0	0	0	0	0	0	0
VIC	44	48	53	50	54	56	50	52	63	70	45	35	<b>620</b>
TAS	5	3	4	0	5	3	2	1	10	8	$\overline{7}$	3	51
SA	18	16	10	12	29	46	56	55	36	31	49	38	396
WA	32	53	61	51	34	56	48	39	47	48	68	52	<b>589</b>
NT	0	0	0	0	0	0	0	0	0	0	0	0	0
AUSTRALIA	223	<b>304</b>	306	<b>279</b>	<b>280</b>	330	<b>364</b>	350	365	426	441	305	3973

#### Living Tissue Donations by Jurisdiction of Retrieval and Month, 2015

#### Living Tissue Donations by Jurisdiction of Retrieval and Type, 2015

	Musculoskeletal	Cardiovascular
QLD	808	0
NSW	1498	11
VIC	616	4
TAS	51	0
SA	396	0
WA	589	0
AUSTRALIA	3958	15





	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
QLD	28	11	28	26	18	18	24	12	23	22	19	12	<b>241</b>
NSW	10	5	4	9	12	9	16	13	10	10	7	$\overline{7}$	112
ACT	1	0	0	0	0	0	0	0	0	0	0	0	1
VIC	16	10	26	9	13	24	7	10	15	14	19	18	181
TAS	0	0	0	0	0	0	0	2	0	1	1	0	4
SA	0	0	1	0	0	3	1	0	0	0	5	2	12
WA	2	0	1	0	1	3	3	1	4	0	1	2	<b>18</b>
NT	0	0	0	0	0	0	0	0	0	0	0	0	0
AUSTRALIA	<b>57</b>	26	60	44	44	<b>57</b>	51	38	<b>52</b>	47	52	41	<b>569</b>

#### Deceased Tissue Donations by Jurisdiction of Retrieval and Month, 2015

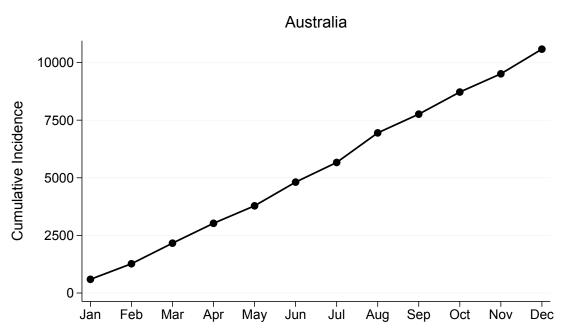
#### Deceased Tissue Donations by Jurisdiction of Retrieval and Type, 2015

	Т	issue O	nly Secto	r	Solid	Organ/	Tissue S	ector		Tissue	e Total	
	ms	cv	skin	pi	ms	cv	skin	pi	ms	cv	skin	pi
QLD	74	19	73	0	25	21	27	2	99	40	100	2
NSW	38	5	0	0	31	35	0	3	69	40	0	3
ACT	0	0	0	0	0	1	0	0	0	1	0	0
VIC	32	25	46	0	19	27	25	7	51	52	71	7
TAS	0	0	0	0	0	4	0	0	0	4	0	0
SA	0	1	0	0	0	10	0	1	0	11	0	1
WA	4	1	0	0	10	2	0	1	14	3	0	1
AUSTRALIA	148	51	119	0	85	100	<b>52</b>	14	233	151	171	14





# Notified Tissue Grafts Implanted (ms, cv, sk)



# Notified Tissue Grafts Implanted per Month, 2015

Notified	Tissue	Grafts	Implanted	hv	Jurisdiction	of	Retrieving	Bank	and	Month	2015
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	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
QLD	168	155	267	207	181	355	222	654	212	285	183	288	3177
NSW	341	393	469	435	400	563	482	475	382	532	429	565	5466
ACT	0	0	0	0	0	0	0	0	0	0	0	0	0
VIC	38	55	67	137	98	44	40	84	116	57	59	146	941
TAS	0	0	0	0	0	0	0	0	0	0	0	0	0
SA	9	14	13	14	6	6	10	5	13	16	24	9	<b>139</b>
WA	38	59	77	69	74	61	98	65	90	69	96	63	859
NT	0	0	0	0	0	0	0	0	0	0	0	0	0
AUSTRALIA	<b>594</b>	676	893	<b>862</b>	759	1029	852	1283	813	959	791	1071	10582

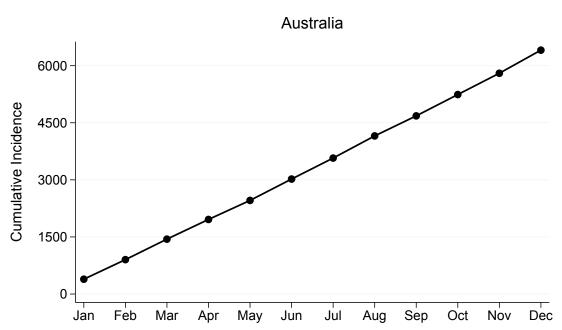
Notified Tissue Grafts Implanted by Jurisdiction of Retrieving Bank and Type, 2015

-	Musculoskeletal	Cardiovascular	Skin
QLD	2049	47	1081
NSW	5362	104	0
VIC	445	62	434
SA	139	0	0
WA	859	0	0
AUSTRALIA	8854	213	1515





# Notified Tissue Graft Recipients (ms, cv, sk)



# Notified Tissue Graft Recipients per Month, 2015

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
QLD	127	150	147	147	127	134	147	182	173	139	147	156	1776
NSW	205	265	302	274	264	342	298	291	257	326	300	363	3487
ACT	0	0	0	0	0	0	0	0	0	0	0	0	0
VIC	21	42	36	43	48	38	37	60	35	35	43	45	<b>483</b>
TAS	0	0	0	0	0	0	0	0	0	0	0	0	0
SA	6	11	6	8	5	4	9	4	9	12	14	6	94
WA	30	46	48	45	56	44	60	45	53	48	56	37	<b>568</b>
NT	0	0	0	0	0	0	0	0	0	0	0	0	0
AUSTRALIA	389	514	<b>539</b>	517	500	<b>562</b>	551	<b>582</b>	527	<b>560</b>	<b>560</b>	607	6408

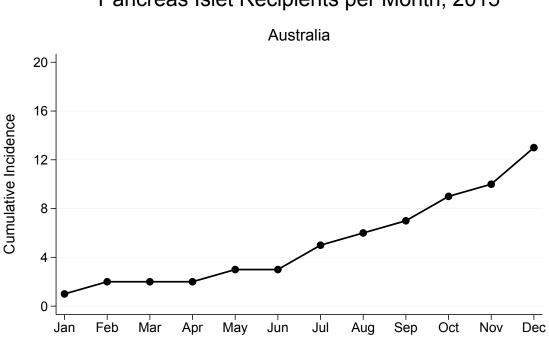
Notified Tissue Graft Recipients by Jurisdiction of Retrieving Bank and Type, 2015

	Musculoskeletal	Cardiovascular	Skin
QLD	1678	47	51
NSW	3384	103	0
VIC	383	62	38
SA	94	0	0
WA	568	0	0
AUSTRALIA	6107	212	89





## Pancreas Islet Graft Recipients



#### Pancreas Islet Graft Recipients by Transplant Jurisdiction and Month, 2015

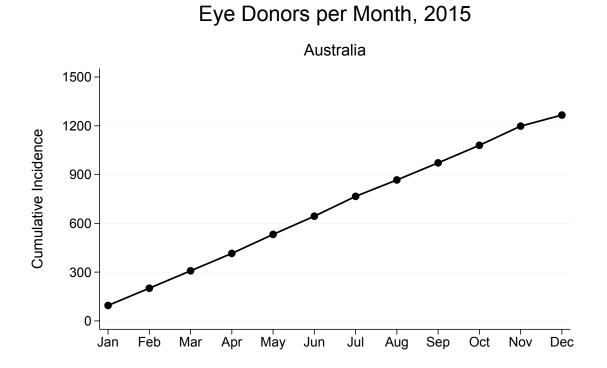
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	$\operatorname{Sep}$	Oct	Nov	Dec	Total
QLD	0	0	0	0	0	0	0	0	0	0	0	0	0
NSW	1	1	0	0	0	0	1	0	0	0	1	1	<b>5</b>
ACT	0	0	0	0	0	0	0	0	0	0	0	0	0
VIC	0	0	0	0	1	0	1	1	1	1	0	1	6
TAS	0	0	0	0	0	0	0	0	0	0	0	0	0
$\mathbf{SA}$	0	0	0	0	0	0	0	0	0	1	0	1	<b>2</b>
WA	0	0	0	0	0	0	0	0	0	0	0	0	0
NT	0	0	0	0	0	0	0	0	0	0	0	0	0
AUSTRALIA	1	1	0	0	1	0	<b>2</b>	1	1	2	1	3	13





# Eye Donors and Transplants

Eye Donors



#### Eye Donors by Jurisdiction of Retrieval and Month, 2015

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
QLD	31	23	36	30	34	36	35	35	33	34	43	20	390
NSW	33	44	33	39	33	28	37	33	22	42	29	15	<b>388</b>
ACT	2	4	4	4	4	5	4	1	3	3	5	2	41
VIC	15	22	18	19	23	28	22	20	21	15	19	21	<b>243</b>
TAS	1	0	0	0	1	0	3	2	2	1	0	1	11
SA	$\overline{7}$	8	8	9	9	8	12	8	10	5	12	3	99
WA	6	5	8	6	13	7	9	2	14	8	10	6	94
NT	0	0	0	0	0	0	0	0	0	0	0	0	0
AUSTRALIA	95	106	107	107	117	112	122	101	105	108	118	68	1266





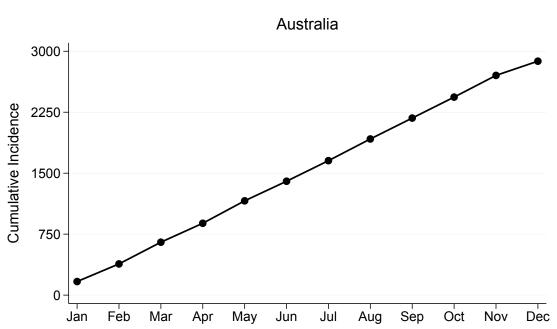
#### Eye Donors by Jurisdiction of Retrieval and Type, 2015

	Eye Only Donors	Eye and Tissue	Eye and Solid Organ	Eye, Solid Organ and
		Only Donors	Only Donors	Tissue Donors
QLD	308	52	4	26
NSW	308	33	18	29
ACT	33	0	8	0
VIC	140	36	38	29
TAS	5	0	4	2
SA	87	0	8	4
WA	75	4	7	8
AUSTRALIA	956	125	87	98





## Notified Eye Tissue Graft Transplants



# Total Eye Tissue Graft Transplants per Month, 2015

Total Eve Ticque	Craft Transplants	by Invisduation	of Retrieving Bank	and Month 2015
Total Eye Tissue	Gran Transplaints	by Jurisalction	of netrieving Dank	and Month, 2015

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
QLD	46	61	80	70	78	66	70	71	72	72	64	50	800
NSW	36	81	87	74	84	79	76	99	79	77	88	59	919
ACT	4	2	3	1	5	3	3	1	1	2	1	1	<b>27</b>
VIC	36	36	50	49	49	42	53	58	52	49	58	34	<b>566</b>
TAS	5	2	1	3	4	3	5	3	2	4	2	3	<b>37</b>
SA	13	13	16	13	14	18	21	17	18	16	21	8	<b>188</b>
WA	23	22	30	23	42	30	24	18	33	38	33	20	336
NT	4	0	0	0	0	0	1	0	0	0	0	0	5
AUSTRALIA	167	<b>217</b>	<b>267</b>	<b>233</b>	<b>276</b>	<b>241</b>	<b>253</b>	<b>267</b>	257	<b>258</b>	<b>267</b>	175	2878





	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
QLD	40	56	65	58	64	53	56	60	63	59	56	40	670
NSW	25	66	67	62	62	63	50	60	51	56	65	41	668
ACT	4	1	3	1	4	2	2	1	1	1	0	0	<b>20</b>
VIC	28	25	34	29	38	34	39	31	39	36	38	18	389
TAS	4	2	1	1	2	1	4	1	2	3	1	1	<b>23</b>
SA	10	13	14	12	14	17	15	14	16	10	18	5	158
WA	8	12	19	6	25	23	16	10	16	26	15	15	191
NT	4	0	0	0	0	0	1	0	0	0	0	0	<b>5</b>
AUSTRALIA	123	175	203	169	<b>209</b>	193	183	177	188	191	193	120	2124

#### Cornea Graft Transplants by Jurisdiction of Retrieving Bank and Month, 2015

#### Sclera Unit Graft Transplants by Jurisdiction of Retrieving Bank and Month, 2015

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
QLD	6	5	15	12	14	13	14	11	9	13	8	10	130
NSW	11	15	20	12	22	16	26	39	28	21	23	18	<b>251</b>
ACT	0	1	0	0	1	1	1	0	0	1	1	1	7
VIC	8	11	16	20	11	8	14	27	13	13	20	16	177
TAS	1	0	0	2	2	2	1	2	0	1	1	2	<b>14</b>
SA	3	0	2	1	0	1	6	3	2	6	3	3	30
WA	15	10	11	17	17	$\overline{7}$	8	8	17	12	18	5	145
NT	0	0	0	0	0	0	0	0	0	0	0	0	0
AUSTRALIA	44	42	64	64	67	48	70	90	69	67	<b>74</b>	55	754