

## Joint statement from ATAGI and THANZ on Thrombosis with Thrombocytopenia Syndrome (TTS) and the use of COVID-19 Vaccine AstraZeneca

21 May 2021

### Key points

- TTS, also known as vaccine induced thrombotic thrombocytopenia (VITT), is a rare newly identified condition with a different mechanism to other causes of thrombosis. Among case reports, there are no known markers for increased risk for TTS/VITT.
- The risk of TTS is not likely to be increased in people with the following conditions, and people in these groups *can receive* COVID-19 Vaccine AstraZeneca:
  - History of blood clots in typical sites
  - Increased clotting tendency that is not immune mediated
  - Family history of blood clots
  - History of ischaemic heart disease or stroke
  - Current or past thrombocytopenia (low platelet count)
  - Those receiving anticoagulation therapy
- The list of conditions for which Comirnaty (Pfizer) is the preferred vaccine *has been expanded to also include*:
  - Past history of idiopathic splanchnic (mesenteric, portal, splenic) vein thrombosis
  - Antiphospholipid syndrome with thrombosis
- TTS can be treated effectively. Guidance on the identification and management of TTS is available from the [Thrombosis and Haemostasis Society of Australia and New Zealand](#).

The Australian Technical Advisory Group on Immunisation ([ATAGI](#)) and the [Thrombosis and Haemostasis Society of Australia and New Zealand \(THANZ\)](#) are closely monitoring local and international data on the very rare and newly identified condition associated with [COVID-19 Vaccine AstraZeneca](#) called [thrombosis](#) with [thrombocytopenia](#) syndrome (TTS) or vaccine induced thrombotic thrombocytopenia (VITT).

This joint statement provides updated information about TTS and reinforces ATAGI's previous advice regarding the use of COVID-19 Vaccine AstraZeneca.

### TTS is distinct from other clotting conditions

TTS is different from other blood clotting conditions and is triggered by the immune system's response to the COVID-19 Vaccine AstraZeneca. It results in both thrombosis *and* low platelet levels. In the majority of cases, pathological antibodies against platelet factor 4 (PF4), a protein released from platelets, are detected. Studies are ongoing to better understand the exact mechanism of TTS. TTS has been reported in patients who have received the COVID-19 Vaccine AstraZeneca and the Janssen COVID-19 Vaccine (the latter is not used in Australia).

TTS is a rare condition with a different mechanism to most other causes of thrombosis and/or thrombocytopenia. Among case reports, there are no known markers for increased risk for TTS. Based upon this, **the following groups of people can receive COVID-19 Vaccine AstraZeneca:**

- People with a past history of venous thromboembolism in typical sites, such as deep vein thrombosis or pulmonary embolism
- People with a predisposition to form blood clots, such as those with Factor V Leiden, or other non-immune thrombophilic disorders

- People with a family history of clots or clotting conditions
- People currently receiving anticoagulant medications
- People with a history of ischaemic heart disease or cerebrovascular accident
- People with a current or past history of thrombocytopenia.

TTS can now be treated very effectively. THANZ have developed [guidance on identification and treatment](#) of TTS.

As part of informed consent for each dose, people who are considering being vaccinated with COVID-19 Vaccine AstraZeneca should be aware that TTS is a very rare potential complication. They should be advised of the possible symptoms of TTS and when to seek medical advice.

**Comirnaty (Pfizer), the alternative COVID-19 vaccine available in Australia, is the preferred vaccine brand for:**

- People aged under 50 years, since the risk of TTS, albeit very low, appears to be higher in younger adults.

**Comirnaty (Pfizer) is recommended for people 16 years and above with:**

- A past history of cerebral venous sinus thrombosis (CVST)
- A past history of heparin-induced thrombocytopenia (HIT)
- A past history of idiopathic splanchnic (mesenteric, portal and splenic) venous thrombosis
- Anti-phospholipid syndrome with thrombosis
- People with contraindications to COVID-19 Vaccine AstraZeneca, i.e.
  - Anaphylaxis to a previous dose of COVID-19 Vaccine AstraZeneca, or to an ingredient of the vaccine
  - Thrombosis with thrombocytopenia occurring after the first dose of COVID-19 Vaccine AstraZeneca
  - Other serious adverse events attributed to the first dose of COVID-19 Vaccine AstraZeneca

*The risk of TTS is lower after the second dose*

[UK data](#) suggest that the risk of TTS is much lower with a second dose, with 15 cases reported to date out of 9.0 million second doses of COVID-19 Vaccine AstraZeneca given. This translates into an estimated rate of 1.7 case per million doses.

ATAGI reinforces that people of any age who have had their first dose of COVID-19 Vaccine AstraZeneca without any serious adverse events can receive the second dose.

*Benefits of vaccination*

Vaccination against COVID-19 remains the best way to prevent severe illness and death from COVID-19. The benefits of vaccination are many and include protection against severe illness and death from COVID-19 for the individual, as well as indirect benefits for the community. The risk of potential outbreaks of COVID-19 is ever-present. The Australian population remains largely unimmunised and susceptible to COVID-19 risks.

People who choose to delay vaccination until a vaccine other than AstraZeneca COVID-19 vaccine is available should be aware they may not be protected against COVID-19 for months. ATAGI and THANZ acknowledge the challenges of decision making as information continues to emerge.

Weekly updates are provided by the Therapeutic Goods Administration ([TGA](#)) on TTS in Australia, and [ATAGI](#) on rates of TTS by age and any related updates to recommendations on COVID-19 vaccine use. To keep up to date visit: <https://www.health.gov.au/news>.