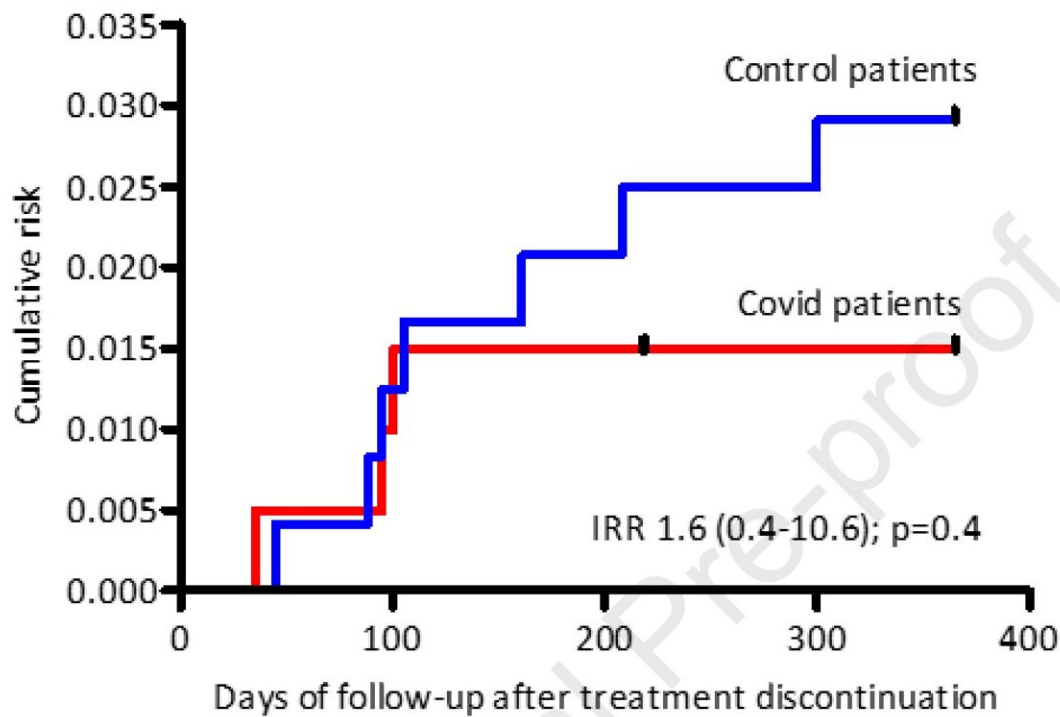


# Venous thromboembolism associated with COVID-19: Therapeutic management and long-term outcomes outlined

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The risk of new thromboembolic events after discontinuation of anticoagulant therapy in patients with pulmonary embolism or deep vein

thrombosis associated with COVID-19 is low and similar to that of patients with venous thromboembolism secondary to hospitalization for other acute medical conditions.

A duration of [anticoagulant](#) treatment limited to 3-6 months has been appropriate for most patients. These are the main results of research just published in *Research and Practice in Thrombosis and Haemostasis* .

The possibility, which emerged from previous studies, that patients affected by COVID-19 maintain an inflammatory state that increases the risk of thromboembolic events even after many months, has raised the question of the optimal duration of anticoagulant therapy after a severe acute event such as a pulmonary embolism.

In fact, if after an episode of [venous thromboembolism](#) (deep venous thrombosis or [pulmonary embolism](#)) secondary to hospitalization for an infectious episode of another nature, the international guidelines substantially agree in deeming a period of anticoagulant therapy ranging from 3 to 6 months; in the case of COVID-19 there are no specific indications and the characteristics of the pathology have led to the assumption that a more prolonged treatment may be necessary in order to prevent recurrences.

The START2-COVID-VTE observational study, promoted by the Arianna Anticoagulation Foundation and conducted in 16 Italian hospitals between 2020 and 2021, prospectively followed 278 patients with venous thromboembolism (VTE) diagnosed during hospitalization for COVID-19 and compared them with a similar group of 300 patients with VTE hospitalized for other [infectious diseases](#) before 2020.

All subjects were followed up for at least one year after the end of anticoagulant therapy and the number of thrombotic recurrences, including arterial events such as heart attacks and strokes, was very low

and similar in the two groups (1.5 and 2.6 per 100 patient-years, in COVID-19 and non-COVID-19 patients, respectively, difference not significant).

Confirming the results of previous studies, the researchers documented that over two thirds (83%) of the venous thromboses observed during COVID-19 infection were isolated pulmonary embolisms. Most of these patients (83.6%) were treated with low molecular weight heparin (LMWH) or fondaparinux during hospitalization and direct oral anticoagulants (DOACs) after discharge (89%). The mean duration of anticoagulant therapy was approximately six months in both COVID-19 patients and controls.

Contrary to what might have been expected, about a quarter of the patients in both groups were still on therapy after one year, despite the provoked nature of the event, suggesting that the therapeutic management was also based on the characteristics of the single subject such as the individual risk of recurrence, the extent of thrombosis or the persistence of respiratory difficulties.

"The low number of events seen in our study after discontinuation of therapy suggests that anticoagulant treatment for a limited period of 3-6 months is generally adequate for the majority of patients with COVID-19-associated venous thromboembolism, similar to what it is currently recommended for patients with VTE secondary to a transient risk factor, including hospitalization for an acute medical disease," explained Professor Walter Ageno of the University of Insubria, coordinator of the study.

**More information:** Walter Ageno et al, Venous thromboembolism secondary to hospitalization for COVID-19 Disease: patient management and long-term outcomes, *Research and Practice in Thrombosis and Haemostasis* (2023). [DOI: 10.1016/j.rpth.2023.100167](https://doi.org/10.1016/j.rpth.2023.100167)

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