



# Easter Island's first Telestroke thrombolysis: breaking down the barriers.

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## Background

Easter Island (Rapa Nui), Chile, is one of the most remote inhabited islands in the world, located at the southeasternmost point of the Polynesian Triangle in Oceania. The nearest continental point lies in Chile, 3,512 km away (Figure 1). 2017 Chilean census registered 7,750 people on the island. Receives more than 60,000 tourists per year. For this entire population, there is one hospital of medium complexity. In 2019 local professionals were trained in a telestroke program with remote clinical support made by neurovascular specialists located in Chile's capital. The telecommunications system is through satellite and intranet connection (Figure 1). From May 2019 to March 2021, there were 75 teleconsultations: 24 were telestroke code activations and 4 were thrombolysed. The aim of this case report is to comment on the first stroke treated on the island via telestroke.

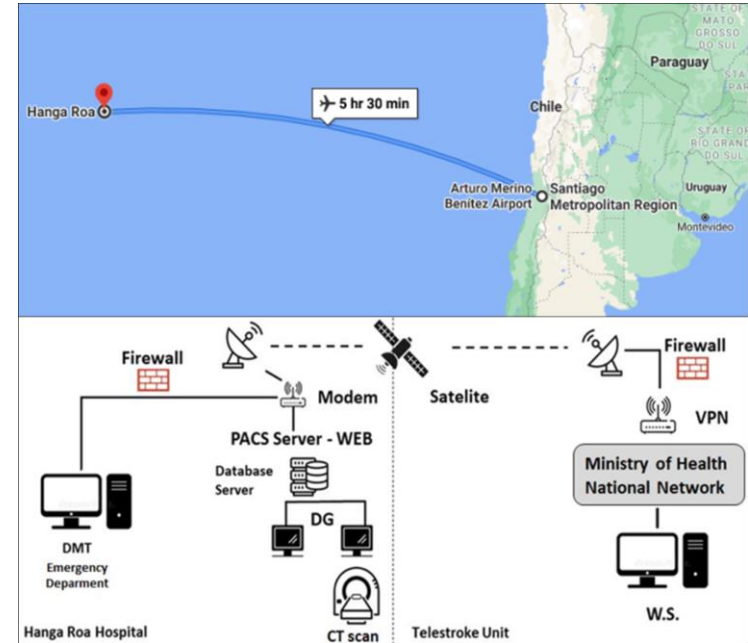
## Case

A 50-year-old native man, with unknown medical history, who suddenly presented right-half-body weakness and aphasia. He arrived at the Hanga Roa Hospital within 15 minutes of symptoms onset. The emergency-room physician conducted an initial physical examination. The non-contrast brain CT was normal (ASPECTS 10/10). Telestroke consultation was initiated 45 minutes later and the telestroke neurologist calculated an NIHSS score of 9 points. There were no contraindications for thrombolysis, so tenecteplase was initiated at 84 min from symptoms onset. The patient improved quickly, 45 minutes later the NIHSS score was 0 points. An atrial fibrillation was also diagnosed. Follow up visit at 3 and 12 months showed no symptom or disability (modified Rankin Score of 0).

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## Conclusions

To our knowledge, this is the first reported case of telemedicine for stroke treatment in such a remote area. The implementation of the program has been very important to generate equity in health and give the island's population access to effective treatment in an area with an obvious geographic gap. This report shows the possibility of breaking down geographic obstacles in distant communities and for patients suffering a stroke.



**Figure 1.** Map and Telecommunications system for telestroke assistance with Hanga Roa **DG** imaging device; **DMT** : Telemedicine mobile device; **PACS**: Picture Archiving and Communication System; **VPN** virtual private network; **WS**: work Station

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