

NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Health Technology Evaluation

Sirolimus gel for treating facial angiofibroma from tuberous sclerosis complex in people 6 years and older

Final scope

Remit/evaluation objective

To appraise the clinical and cost effectiveness of sirolimus gel within its marketing authorisation for treating facial angiofibroma associated with tuberous sclerosis complex in people 6 years and older.

Background

Tuberous sclerosis or tuberous sclerosis complex is a rare genetic condition that causes non-cancerous (benign) tumours to develop in different parts of the body.¹ The tumours most often affect the brain, kidneys, heart, lungs, eyes and skin. Two disease causing genes have been identified: TSC1 and TSC2. Around 1 in 3 people with tuberous sclerosis complex inherit the disease from a parent who also has the condition.²

The effect of tuberous sclerosis complex on the skin can cause small facial bumps known as angiofibromas, consisting of blood vessels and fibrous tissue.^{3,4} Most people with tuberous sclerosis complex will develop facial angiofibromas³, and they are considered one of the key diagnostic criteria for tuberous sclerosis complex.⁵ They usually develop from around the age of 5 and may increase in size and number over a person's life.^{3,4} They generally occur centrally on the face as clusters of pink, red or brown lesions, often on the nose, cheeks and chin. These can cause recurrent bleeding, irritation and infection, eventually leading to facial scarring and disfigurement. This can negatively impact quality of life, affecting psychological and psychosocial wellbeing.^{3,4} The severity of the condition varies amongst individuals, and, in rare cases, lesions may become large enough to block vision or breathing through the nose.⁶

The estimated number of people with tuberous sclerosis complex in the UK is between 3,700 and 11,000.¹ Facial angiofibromas are estimated to occur up to 75% of children with the condition, rising to 88% of adults aged over 30.⁴

There is no cure for tuberous sclerosis complex and no NICE guidelines for treating the associated facial angiofibroma. In people where the condition significantly affects quality of life, treatment options include vascular or ablative lasers, photodynamic (light) therapy, surgical excision, dermabrasion ("exfoliation"), or cryosurgery ("freezing"). These procedures are often painful and may result in permanent scarring.^{3,5}

The technology

Sirolimus gel (Hyftor, Plusultra) has a marketing authorisation in the UK for the treatment of facial angiofibroma associated with tuberous sclerosis complex in adults and children aged 6 years and older.

Intervention(s)	Sirolimus gel
Population(s)	People aged 6 and older with facial angiofibroma associated with tuberous sclerosis complex
Comparators	Established clinical management including, but not limited to: <ul style="list-style-type: none"> • vascular or ablative lasers • photodynamic therapy • surgical excision • dermabrasion • cryosurgery
Outcomes	The outcome measures to be considered include: <ul style="list-style-type: none"> • improvements in facial angiofibroma (including number and size) • adverse effects of treatment • health-related quality of life.
Economic analysis	<p>The reference case stipulates that the cost effectiveness of treatments should be expressed in terms of incremental cost per quality-adjusted life year.</p> <p>The reference case stipulates that the time horizon for estimating clinical and cost effectiveness should be sufficiently long to reflect any differences in costs or outcomes between the technologies being compared.</p> <p>Costs will be considered from an NHS and Personal Social Services perspective.</p> <p>The availability of any commercial arrangements for the intervention, comparator and subsequent treatment technologies will be taken into account.</p>
Other considerations	Guidance will only be issued in accordance with the marketing authorisation. Where the wording of the therapeutic indication does not include specific treatment combinations, guidance will be issued only in the context of the evidence that has underpinned the marketing authorisation granted by the regulator.
Related NICE recommendations	None.
Related National Policy	The NHS Long Term Plan (2019) NHS Long Term Plan NHS England (2023) Manual for prescribed specialist services (2023/2024)

	Tuberous Sclerosis Association (2019) UK guidelines for managing tuberous sclerosis complex: A summary for clinicians in the NHS
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References

1. Tuberous Sclerosis Association (2022) [What is TSC?](#) Accessed September 2024.
2. Caban C, Khan N, Hasbani DM, et al. (2016) [Genetics of tuberous sclerosis complex: implications for clinical practice](#). The Application of Clinical Genetics 10:1-8.
3. TSC Alliance (2023) [Clinical manifestations: Skin](#). Accessed September 2024.
4. Monaghan M, Takhar P, Langlands L, et al. (2022). [Impact of facial angiofibromas in tuberous sclerosis complex and reported efficacy of available treatments](#). Frontiers in Medicine 9:967971.
5. Northrup H, Aronow ME, Bebin EM, et al. (2021) [Updated international tuberous sclerosis complex diagnostic criteria and surveillance and management recommendations](#). Pediatric Neurology 123:50-66.
6. Quartier J, Lapteva M, Boulaguiem Y, et al. (2021) [Polymeric micelle formulations for the cutaneous delivery of sirolimus: A new approach for the treatment of facial angiofibromas in tuberous sclerosis complex](#). International Journal of Pharmaceutics 604:120736.
7. Amin S, Lux A, Khan A, et al. (2017) [Sirolimus Ointment for Facial Angiofibromas in Individuals with Tuberous Sclerosis Complex](#). International Scholarly Research Notices 8404378.