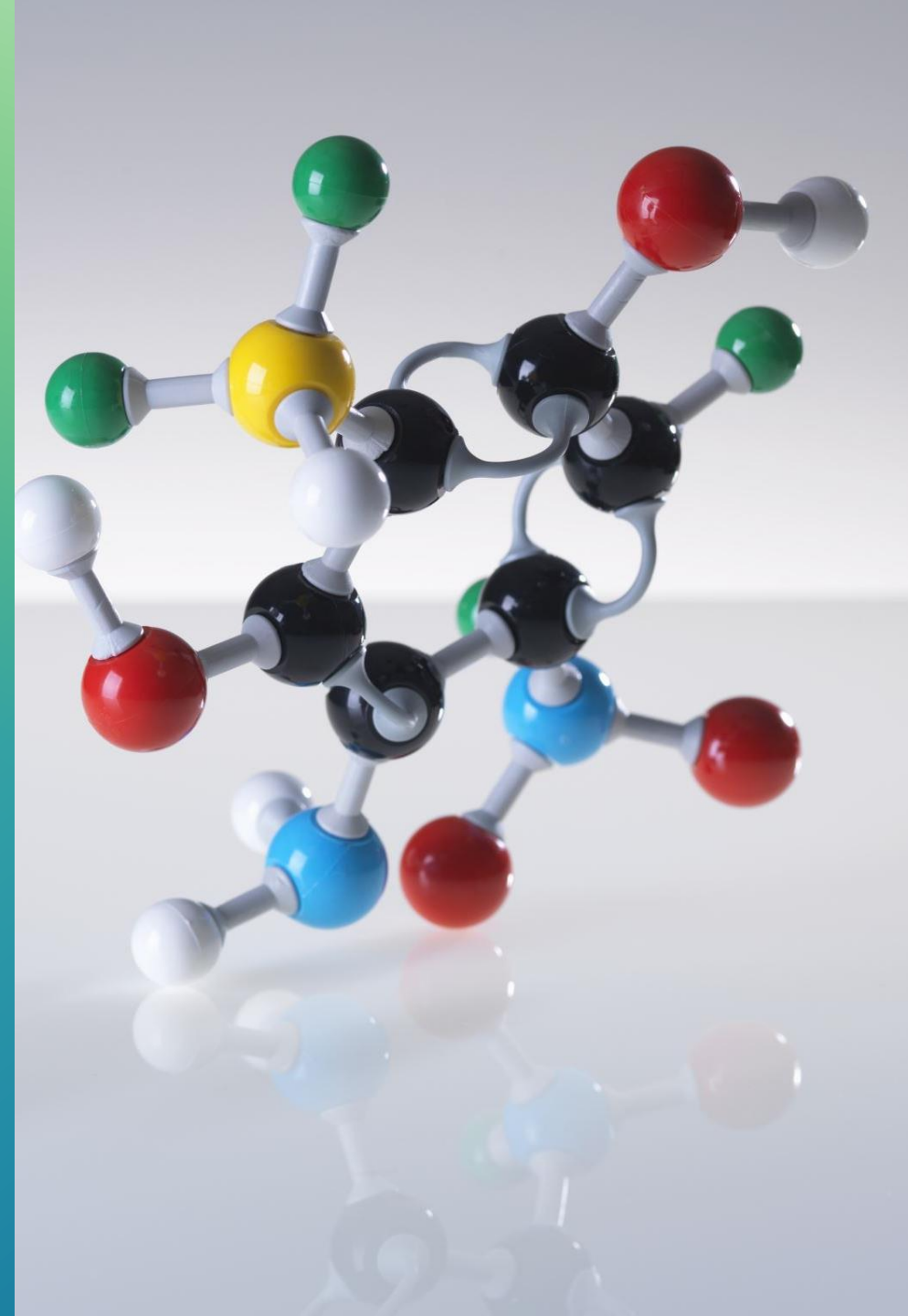


One Gene, Many Stories: Unified in Advocacy

LFS UK 2025 Conference

September 2025

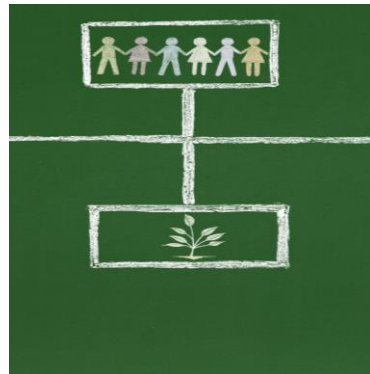


The South Brazilian Story



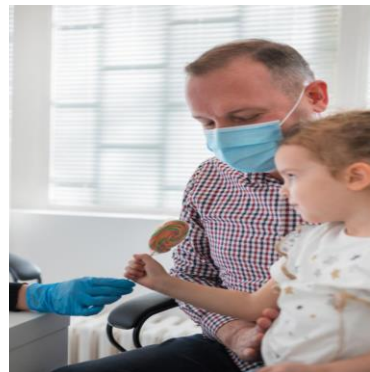
Genetic Mutation Discovery

Brazilian clinicians found many Adrenocortical Carcinoma cases in children, leading to genetic testing that identified a shared TP53 mutation among patients.



Founder Effect Tracing

Population geneticists traced the mutation to a common ancestor, demonstrating the founder effect in the Brazilian population.



Public Health Impact

New screening policies were introduced, enabling rapid genetic testing and raising awareness for at-risk families.



The Mystery of the Founder

Legendary Explorer Hypothesis

A prominent theory suggests the founder was a resilient explorer gifted with “gene silencing power” that conferred cancer resistance.

Prolific Descendants Theory

Another hypothesis is that the founder had many descendants, spreading the gene widely across generations.

Hidden Genetic Advantages

Some theorise the mutation provided hidden benefits, such as increased resistance to historical plagues.



Variant Risk Comparison

Classic LFS Variant Risks

Classic LFS variants have around 90% lifetime cancer risk, with childhood sarcomas and brain tumours. Cancers often appear by age 20-25.

Brazilian R337H Variant Differences

The Brazilian R337H variant has a lower lifetime risk of about 60%, with extreme risk of adrenocortical carcinoma in childhood. Other than that, cancer onset typically age 40-45.

Thyroid Cancer and Surveillance

Both variants show increased thyroid cancer risk, especially in R337H. Proactive and tailored cancer surveillance is vital for all LFS types.

Brazilian LFS Cancer Spectrum R337H

Cancer Type	Relative Frequency in Brazilian LFS	Key Notes
Adrenocortical Carcinoma (ACC)	Very High	Signature cancer , especially in children.
Breast Cancer	Very High	Most common cancer in adult women.
Soft Tissue & Bone Sarcomas	High	A core feature of LFS globally.
Brain Tumors	High	Choroid Plexus Carcinoma in kids, Gliomas in adults.
Thyroid Cancer	Moderately High	More prominent than in other LFS populations.
Others (Colorectal, Leukemia, etc.)	Elevated	Lower frequency, but risk is still significant.

The Brazilian LFS experience underscores that while the R337H mutation has a unique risk profile (extremely high ACC risk, prominent thyroid cancer), it still confers a high risk for the core LFS cancers like breast cancer, sarcomas, and brain tumours. This is why comprehensive, multi-organ surveillance is just as critical in Brazil as it is for LFS patients elsewhere in the world.



Advocacy in Action: Our Next Steps

Engage in Research

Contribute to registries and studies to transform personal experiences into actionable data that drives medical progress.

Amplify Collective Voice

Share stories and support advocacy groups to strengthen our unified influence on critical issues like WB-MRI access.

Promote Systemic Change

Advocate for UK-wide guidelines that ensure everyone receives consistent and standardised care throughout the health system.

My Story

