

INVESTMENT IN RESEARCH SAVES LIVES AND MONEY

Alopecia Areata

Alopecia areata is an autoimmune skin disease that causes hair loss on the scalp, face, and sometimes other areas of the body. The hair loss tends to be unpredictable: hair may regrow, and it can fall out again—or it may not. This cycle can continue for years.^{1,2} In addition to hair loss, those with alopecia areata sometimes have nail changes, but they are usually otherwise in good health. However, hair loss causes changes in a person's appearance that can affect his or her quality of life and self-esteem, potentially leading to depression, anxiety, and other emotional or psychological issues.³ Currently, no cure or FDA-approved drug treatments for alopecia areata are available.^{1,4}

TODAY

6.8 million

people in the U.S. have had alopecia areata in their lifetime.¹

147 million people worldwide are affected by alopecia areata.¹

People in the U.S. have a **2.1%** lifetime risk of developing alopecia areata.¹

COST

\$1,384*:

Average out-of-pocket costs to treat and live with alopecia areata per year.⁴

*Based on a survey of 675 alopecia areata patients in the U.S.

\$50,000:

Annual cost of tofacitinib, an arthritis medication that is also effective for regrowing hair for some patients with alopecia areata.^{5,6}

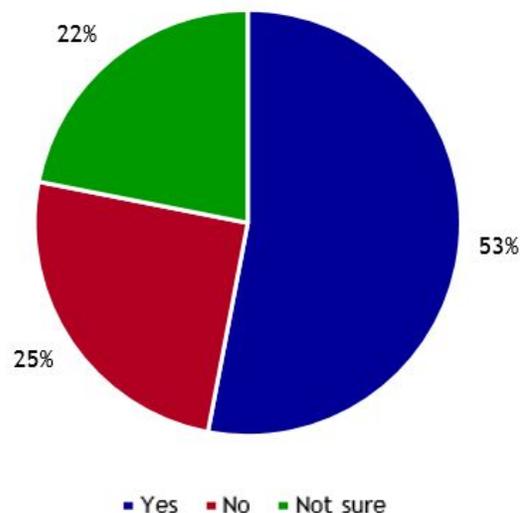
Research Delivers Solutions

Genetic studies have found that cellular molecular pathways involving **Janus kinase (JAK)** enzymes are often disrupted in patients with alopecia areata. Several case series and clinical trials have shown that drugs called JAK inhibitors can successfully reverse the effects of alopecia areata. These results show immense promise for the development of oral JAK inhibitor drugs for future treatment; large clinical trials are ongoing.⁷

Gene expression profiling of tissue samples from patients with alopecia areata has demonstrated that increased activation of key immune pathways may play a role in driving inflammation and the disease process. Treatment with dupilumab, a drug targeting one of these pathways, has led to hair regrowth in patients with alopecia areata who also had eczema. Ongoing and future clinical studies examining narrowly targeted therapeutics may help uncover the role of specific immune pathways in the development of alopecia areata and pave the way for additional clinical approaches to treating patients.⁸

Studies analyzing the microbiome in mice with alopecia areata have found imbalances in gut microbiota described as dysbiosis, suggesting that the gut microbiome may play a role in disease development. Case studies have reported hair regrowth in patients with alopecia areata who have undergone fecal microbiota transplants (FMT). These findings have led to the initiation of a clinical study to assess FMT as a potential treatment for patients with alopecia areata.^{9,10}

Would you be willing to pay \$1 per week more in taxes if you were certain that all of the money would be spent on additional medical research?



Source: A Research!America poll of U.S. adults conducted in partnership with Zogby Analytics in January 2020

Alopecia Areata

Then. Now. Imagine.

THEN

Before the 1930s, the cause of alopecia areata was unknown and many physicians believed it was a sign of parasites, emotional stress, or a nutritional deficiency in the blood.⁹

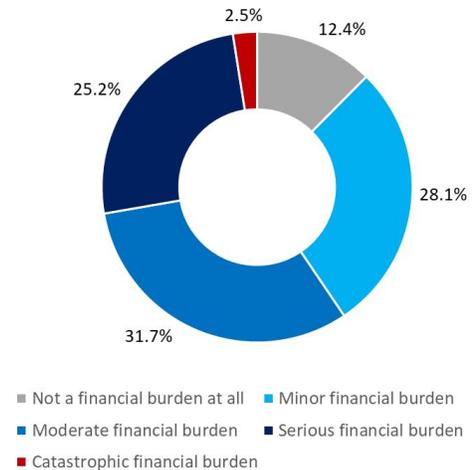
NOW

Scientists know alopecia areata is an autoimmune disease, and genome-wide studies have potentially identified the genes responsible for alopecia areata.⁹

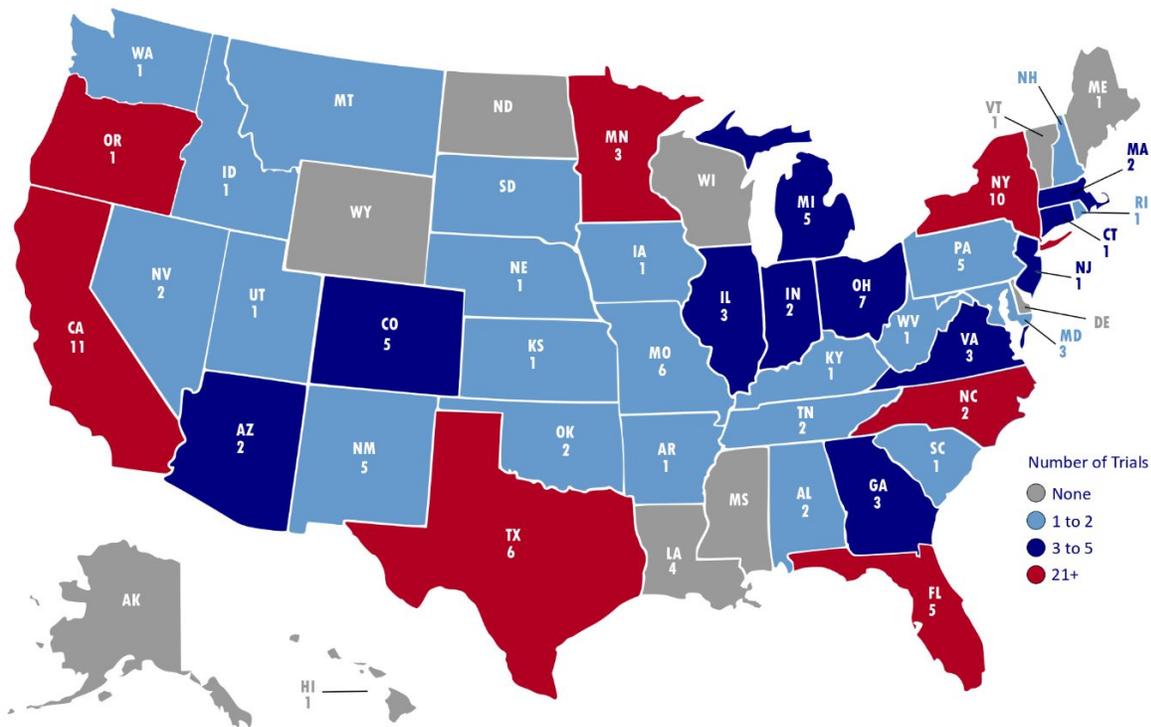
IMAGINE

A cure.

Reported Financial Burden of Alopecia Areata: Survey of 675 Patients⁴



Number of Clinical Trials for Alopecia Areata by State



1. "What you need to know about alopecia areata." NAAF. N.d.
2. "Alopecia areata: Overview." AAD. N.d.
3. "Alopecia areata." NLM. 2020.
4. Li et al. "Association of out-of-pocket health care costs and financial burden for patients with alopecia areata." *JAMA Dermatol.* 2019;155(4):493-494.
5. Crispin et al. "Safety and efficacy of the JAK inhibitor tofacitinib citrate in patients with alopecia areata." *JCI.* 2016;1(15):e89776.
6. "The Price They Pay." *NYTimes.* 2018.
7. Pratt et al. "Alopecia areata." *Nat Rev Dis Primers.* 2017;3:17011.
8. Renert-Yuval et al. "The Changing Landscape of Alopecia Areata: The Therapeutic Paradigm." *Adv Ther.* 2017;34(7):1594-1609.
9. Nair et al. "649 Gut microbiota plays a role in the development of alopecia areata". *J Investig Dermatol.* 2017;137(5): S112.
10. Rebello et al. "Hair Growth in Two Alopecia Patients after Fecal Microbiota Transplant". *ACG Case Rep J.* 2017;4:e107.

SOURCE: NIH Clinical Trials. N.d.

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