



CelluliteDX

THE GENETIC TEST THAT EVALUATES
A WOMAN'S RISK FOR DEVELOPING
MODERATE TO SEVERE CELLULITE
(GYNOID LIPODYSTROPHY)

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The CelluliteDX Genetic Test for Moderate to Severe Cellulite (gynoid lipodystrophy) recently introduced by DermaGenoma, Inc. (www.dermagenoma.com) allows physicians to evaluate women's risk for developing Nurnberger-Muller grade 2 (or

Many cellulite treatments currently exist; however, some of these therapies have limited and/or questionable efficacy. Early initiation of cellulite treatment may achieve maximal therapeutic benefits, including halting the progression and

understanding of cellulite pathogenesis and more effective cellulite therapeutics.

CELLULITE (GYNOID LIPODYSTROPHY)

Cellulite affects a vast majority of post-adolescent women, with current estimates that approximately 80% of women will develop cellulite.

Furthermore, cellulite afflicts women irrespective of their weight with the telltale cottage cheese-like dimpling most often found on the thighs, hips and buttocks. Even with the high prevalence of cellulite, a strong interest has not been spurned in the biomedical field to understand the pathogenesis of cellulite.

severity of cellulite. In addition, the genetic marker used in the CelluliteDX Genetic Test (www.cellulitedx.com) may open the door to an improved

greater) cellulite. Early screening for women who are likely to develop moderate to severe cellulite could allow preventative therapeutic and life style choices.

Early initiation of cellulite treatment may achieve maximal therapeutic benefits, including halting the progression and severity of cellulite.

In this regard, few systematic epidemiological studies have been conducted to determine the prevalence of moderate to severe cellulite. However, dermatologists estimate that more than half of all women will develop moderate to severe cellulite. While the underlying

(adipose tissue). This is evidenced by the minimal efficacy of liposuction and weight loss in reducing cellulite severity.

Since these methods usually affect deeper layers of adipose tissue, the more superficial layer where cellulite is located remains minimally

The variant analyzed by the CelluliteDX Genetic Test is a major determinant of ACE levels and activity. The CelluliteDX Genetic Test looks for the insertion (I) or deletion (D) of a 287 base pair marker in the ACE gene, which is located in chromosome 17. ACE levels increase proportionally with the number of ACE genes containing the D allele.⁴ In addition, angiotensin II has been shown to regulate subcutaneous adipose tissue blood flow, which may explain its relationship to cellulite risk.⁵ Patients with even one copy of the ACE gene D allele have an increased risk for the development of moderate to severe cellulite.

The CelluliteDX Genetic Test is conducted using a simple buccal swab to collect a patient's genetic sample. Variations in the angiotensin I-converting enzyme (ACE) gene are genotyped to assess one's risk for developing moderate to severe cellulite. Patients with the high risk ACE variant have approximately a 70% chance of developing Nurnberger-Muller grade 2 (or greater) cellulite. In contrast, patients with the low risk ACE variant have a lower risk for developing moderate to severe cellulite.

EARLY GENOTYPE-DIRECTED CELLULITE THERAPY

Advances in human genetics empower researchers to discover the genetic basis of many common conditions. As genetic science is evolving at a rapid pace, new discoveries are made almost

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pathology of cellulite requires additional study, it appears that cellulite results from a dysfunction of the subcutaneous fat proximal to the skin surface and the underlying connective tissue.¹ Cellulite is, therefore, a disorder of the skin, rather than a disorder that manifests from excess fat

affected. In addition, the microvasculature in the skin also appears to play an important role in the development of cellulite. While the pathogenesis of cellulite is not completely understood, there appears to be good evidence of the hereditary nature of cellulite.

CELLULITE DX GENETIC TEST DETAILS

The CelluliteDX Genetic Test examines a genetic variation in the gene that encodes the angiotensin I-converting enzyme (ACE). While the pathophysiology of cellulite is not completely understood,^{1,2} Emanuele and co-workers recently discovered a strong association between ACE gene variants and moderate to severe cellulite.³ ACE plays an important role in the Renin-angiotensin system, which regulates blood pressure and water balance. ACE is responsible for the conversion of angiotensin I to the more potent vasoconstrictor, angiotensin II.




daily. The biomolecular pathways that underlie the development of cellulite are not completely understood.

The CelluliteDX Genetic Test for Moderate to Severe Cellulite helps the medical professional assess a patient's risk for developing Nurnberger-Muller grade 2 (or greater) cellulite. Numerous therapies are currently available for the treatment of cellulite, although most have limited scientific evidence to their efficacy.^{6,7} However, identification of patients who are at a high risk for developing moderate to severe cellulite could allow early initiation of cellulite treatments. While therapies are unlikely to reverse severe cellulite once it has occurred, early lifestyle changes including exercise, medication choices (i.e. avoiding birth control and hormone replacement therapy), and therapies, such as laser therapy, may slow or stop the development of severe cellulite and improve visual aesthetics.

Identifying those at an increased risk for moderate to severe cellulite will allow medical professionals to start therapy and lifestyle changes that may reduce one's risk for developing moderate to severe cellulite.

DermaGenoma is committed to providing the latest in genetic discoveries to patients and their doctors. Although the susceptibility genes for moderate to severe cellulite are not yet fully characterized, prevailing evidence supports the important role of the endothelial function pathway (1-2). Furthermore, understanding the pathogenesis of grade 2 (or

greater) cellulite could enable the discovery of new and more effective therapies. 

References

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About DermaGenoma, Inc.

Headquartered in Irvine, CA, DermaGenoma, Inc. is a molecular dermatology company founded by leading researchers and specialists in genetics and dermatology. The company is dedicated to the research and development of new diagnostics and prescription based therapies for skin conditions tailored to an individual's genetic makeup.



DermaGenoma diagnostic genetic tests include:

[HairDX](#), the first genetic screening test for Female and Male Pattern Baldness (Androgenetic Alopecia)

[The HairDX \(RxR\) Genetic Test for Finasteride Response](#). In addition to predicting Finasteride response for the treatment of common hair loss, the test helps doctors assess if a patient has an increased risk of developing Benign Prostatic Hyperplasia (Enlarged Prostate).

[The PsoriasisDX Genetic Test](#) helps identify those at high risk for developing Psoriatic arthritis (PsA) before they experience arthritic symptoms, providing the opportunity to lessen joint damage through early medical intervention.

[The HerpesDX Genetic Test for Frequent Genital Herpes](#) helps doctors assess patients' risk for developing frequent Genital Herpes (HSV-2) outbreaks. Until now, physicians have been unable to give an answer to the most common question asked by recently infected Genital Herpes patients: "Will I have frequent outbreaks?"

DermaGenoma genetic tests are available through physicians' offices nationwide, and are administered using simple cheek swabs. Follow DermaGenoma on [Twitter: @DermaGenomaInc](#) and on [Facebook](#).