



EVERSANA
INTOUCH[®]

**DHC Webinar:
Lyme Bomb Detector**

April 2024

The Situation: Changing Infection Landscape



The Challenge:

- Educate people living in cities that ticks are making a home in urban areas, representing a heightened risk of Lyme disease
- Increase diagnosis and treatment by making it easier for city dwellers, including people of color, to get diagnosed and find treatment





TICK
TICK
TICK

Our cities are full of ticking Lyme bombs. You might think of Lyme disease as a rural problem in the spring, but the truth is, ticks are active year-round when temperatures are above freezing, and they are here in your city. Once detonated, Lyme disease can bring lasting devastation, particularly to underserved urban communities. Join us in defusing the ticking Lyme bombs at GLA.org.



Ticking Lyme Bomb

Disease Awareness

A gritty, cringe-inducing campaign for the Global Lyme Alliance featuring a Mothra-sized tick covering a large swath of New York's Central Park.

The message? Lyme disease, which can be contracted from the bite of a deer tick, isn't just a rural or suburban problem anymore.



The Results:

The initial campaign launch drove awareness in key urban markets including New York City.

We generated buzz with local news media coverage and garnering writeups in numerous publications.

We gained attention in a variety of creative award shows.

But there was one fact along the way we just couldn't shake...



Insight

Even with increased awareness and a highly educated public, diagnosis remains elusive in those with tick bite rashes for many.

That's because even for trained professionals, Lyme disease is difficult to detect on Black and brown skin.



Dr. Crystal F. Barnwell

Lyme Disease Specialist

“Black and brown urban communities are most at risk because the tell-tale sign of a tick bite—the red rash—is harder to spot on dark skin. So that population often ends up misdiagnosed and with untreated, severe Lyme disease.”





DEFUSING THE TICKING LYME BOMB



**This was a health equity
issue we could not ignore.**

So, we set out to solve it.



We Utilized Co-Creation, Seeking to Speed Diagnosis Through Innovation



The Co-creation Process is Built on a Foundation of Respect, Lateral Thinking and Scientific Rigor

Understand Dermatologists

Map physician experiences, challenges, values, unmet needs, diagnostic styles and approaches



Understand Diagnostics

Use lateral-thinking exercises to build on the current diagnosis approach—and successful diagnostic approaches with similar challenges in the dermatology space



Create an MVP

Through months of ideation and development, create a minimum viable prototype (MPV)



Finalize Diagnostic and Build Use

Finalize go-to-market app. Rollout app to high-touch dermatologists in urban markets. Employ thought leadership influencers to proliferate awareness and use.



Co-Creation Working Session



The Outcome

We created the first smartphone tool enabling earlier detection of Lyme rashes on Black and brown skin and more accurate identification of the disease overall.



Step 1: Data Collection

TICK-NOLOGY



TRAINING DATA

~50% LYME

~50% NON-LYME

THOUSANDS OF IMAGES



Step 2: Data Pre-processing

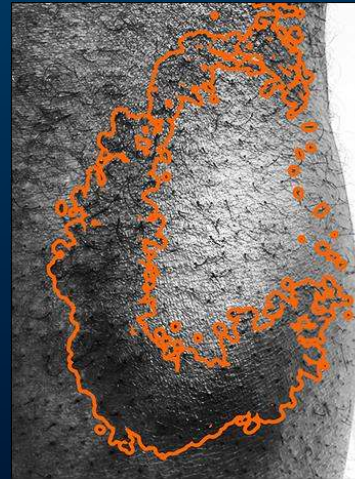


SCALING, ROTATING,
CROPPING

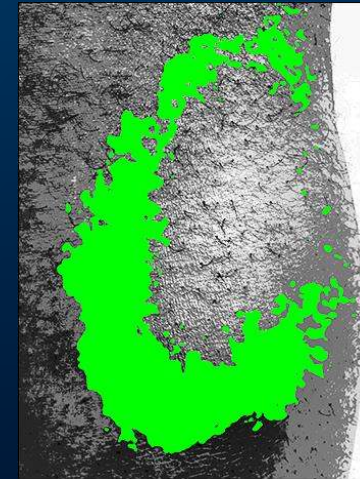
CONTRAST-LIMITING ADAPTIVE HISTOGRAM EVALUATION (CLAHE)



GREYSCALE



CONTRAST,
DETECT EDGES



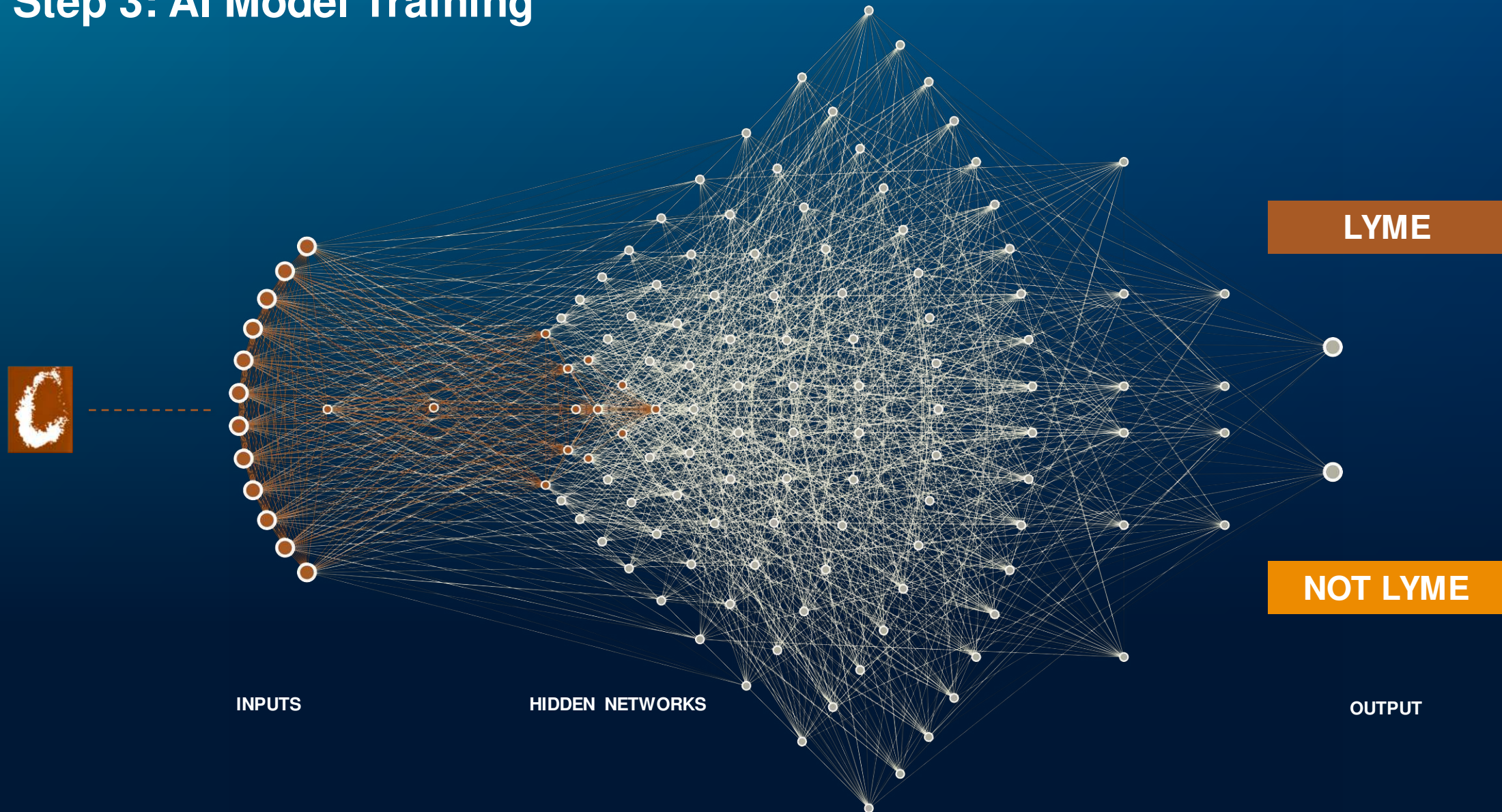
FILL
SPECIFICITY



FINAL




Step 3: AI Model Training



Before user self-reporting, our system achieves
79.6% accuracy in detecting Lyme rashes from
smartphone pictures.



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EARLY **LYME**
SYMPTOMS QUIZ

Select the symptoms and conditions that apply to you

HEAD, FACE, NECK ▾

SORE THROAT, SWOLLEN GLANDS

HEADACHES

JAW PAIN / STIFFNESS

TINGLING SENSATIONS

NECK STIFFNESS

HEIGHTENED ALLERGIC SENSITIVITIES

TWITCHING OF FACIAL/OTHER MUSCLES


FACIAL NERVE (BELL'S) PALSY
(FACIAL MUSCLE WEAKNESS OR PARALYSIS)

DIGESTIVE SYSTEM >

RESPIRATORY / CIRCULATORY >

GET REPORT

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YOUR REPORT

0 1 /

RASH
ANALYZER

06%

It is **very unlikely** you have a Lyme rash.

0 2 /


EARLY LYME
SYMPTOMS
QUIZ

STAGE 2


Our quiz indicates you have symptoms of **Early disseminated Lyme disease, also known as stage 2**. You are encouraged to speak to a doctor as soon as possible.

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FIND A DOCTOR

 GLOBAL
LYME
ALLIANCE

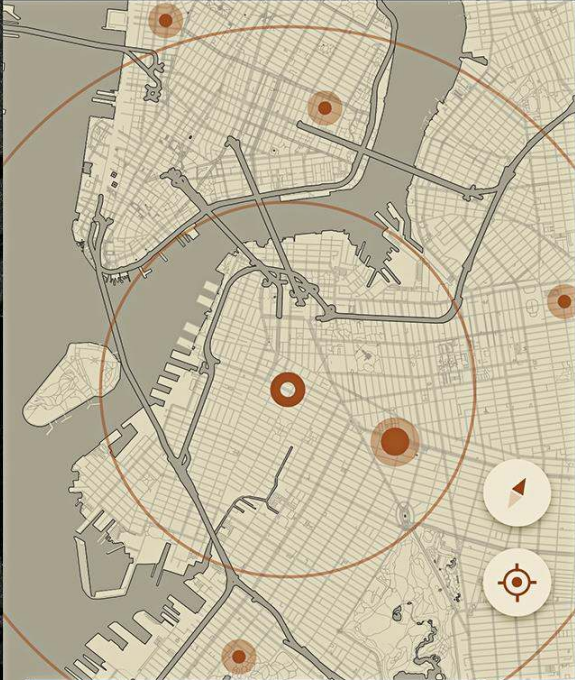
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FIND A DOCTOR

Lyme specialists near you






Dr John Smith, MD

5.0 ★★★★★ (8)

Infectious disease physician
(718) 613-1702



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LYME SYMPTOMS
QUIZ

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DOWNLOADABLE
REPORT

DOCTOR
LOCATOR

Innovative Thinking Can Start by Asking:

- What are the problems we could solve for the patient populations our brands serve?
- How can we revolutionize the patient experience?
- How could AI, innovation, and technology expedite the end-to-end journey by accelerating testing, diagnosis, and treatment initiation?
- How could we shift to designing experiences above audience across HCP and patient audiences?



QUESTIONS?

