

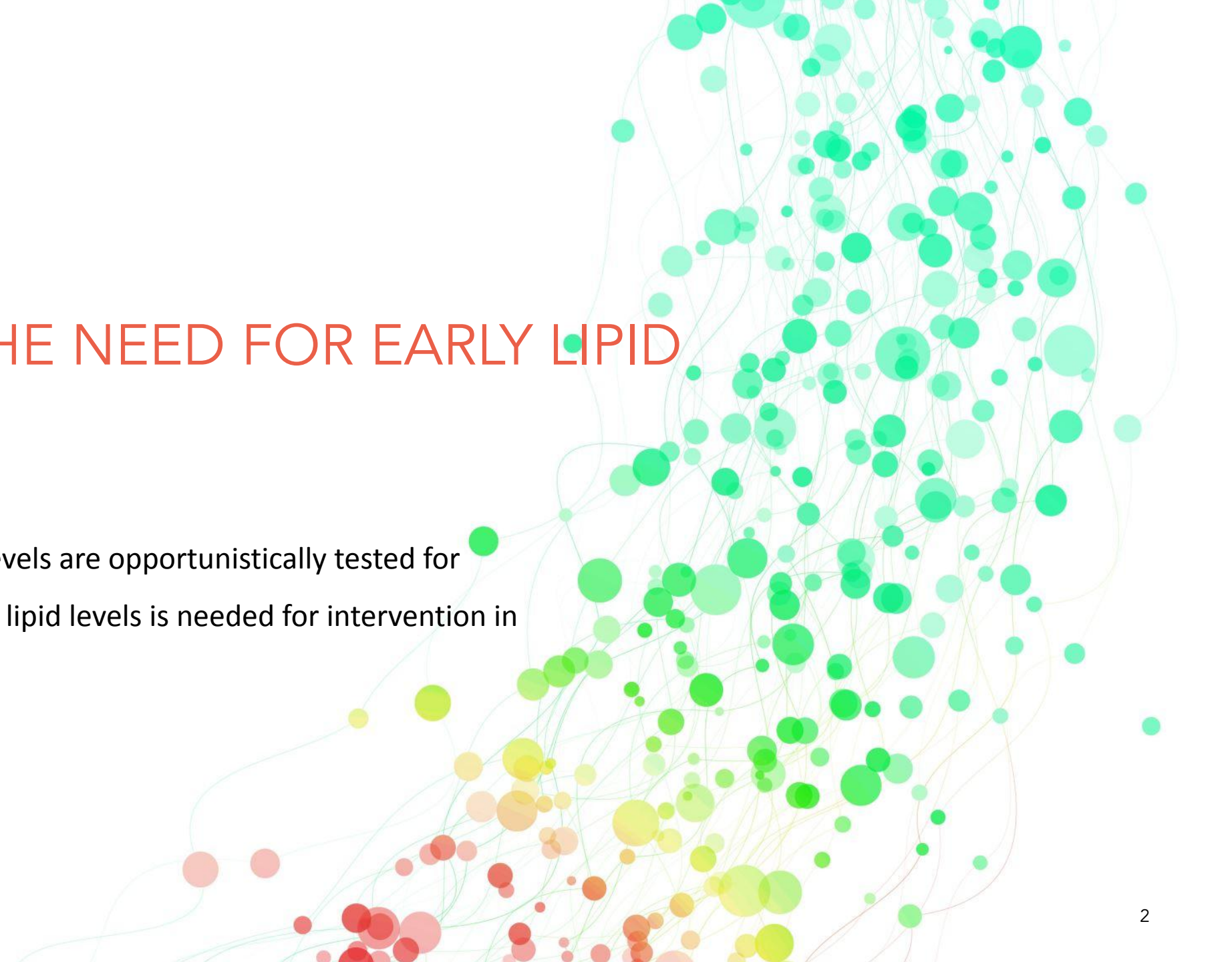
ABL – PREDICTING LOW LIPID FOR EARLY INTERVENTION

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TACKLING THE NEED FOR EARLY LIPID SCREENING

- Low lipid and apo-B levels are opportunistically tested for
 - Early detection of low lipid levels is needed for intervention in childhood
- 

RELEVANT LITERATURE & DATA

- <https://www.ncbi.nlm.nih.gov/books/NBK532447/>
- <https://link.springer.com/article/10.1007/s12652-019-01374-3>
- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8560840/>
- <https://www.cdc.gov/nchs/nhanes/index.htm>

Journal of Ambient Intelligence and Humanized Computing (2023) 14:15523–15533
<https://doi.org/10.1007/s12652-019-01374-3>

ORIGINAL RESEARCH



Lipid profile prediction based on artificial neural networks

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LDL
($<15\text{mg/dL}$)

Frequency in data
set = 2/8621

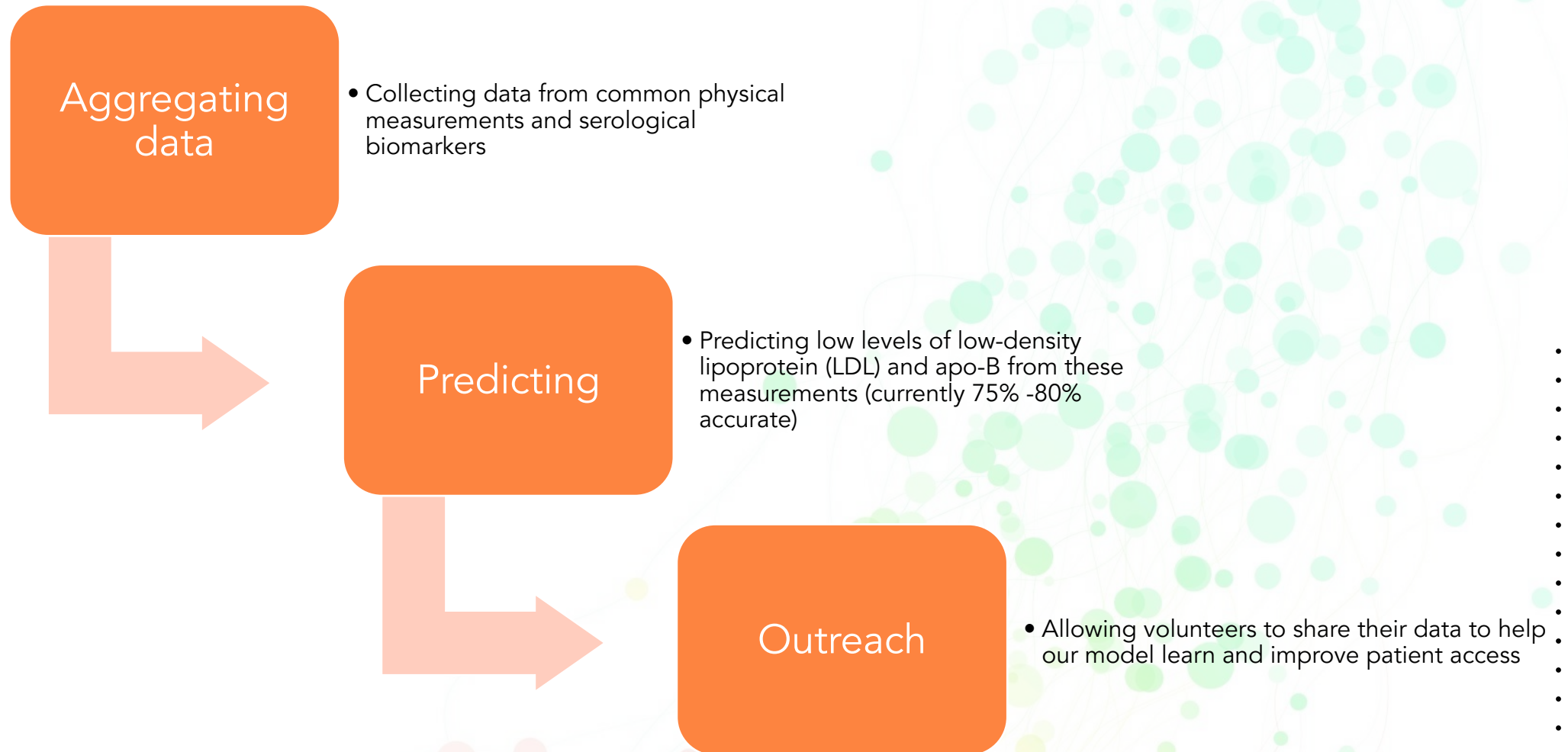
Can estimate around
18 Americans
underdiagnosed

Apo-B
($<20\text{mg/2L}$)

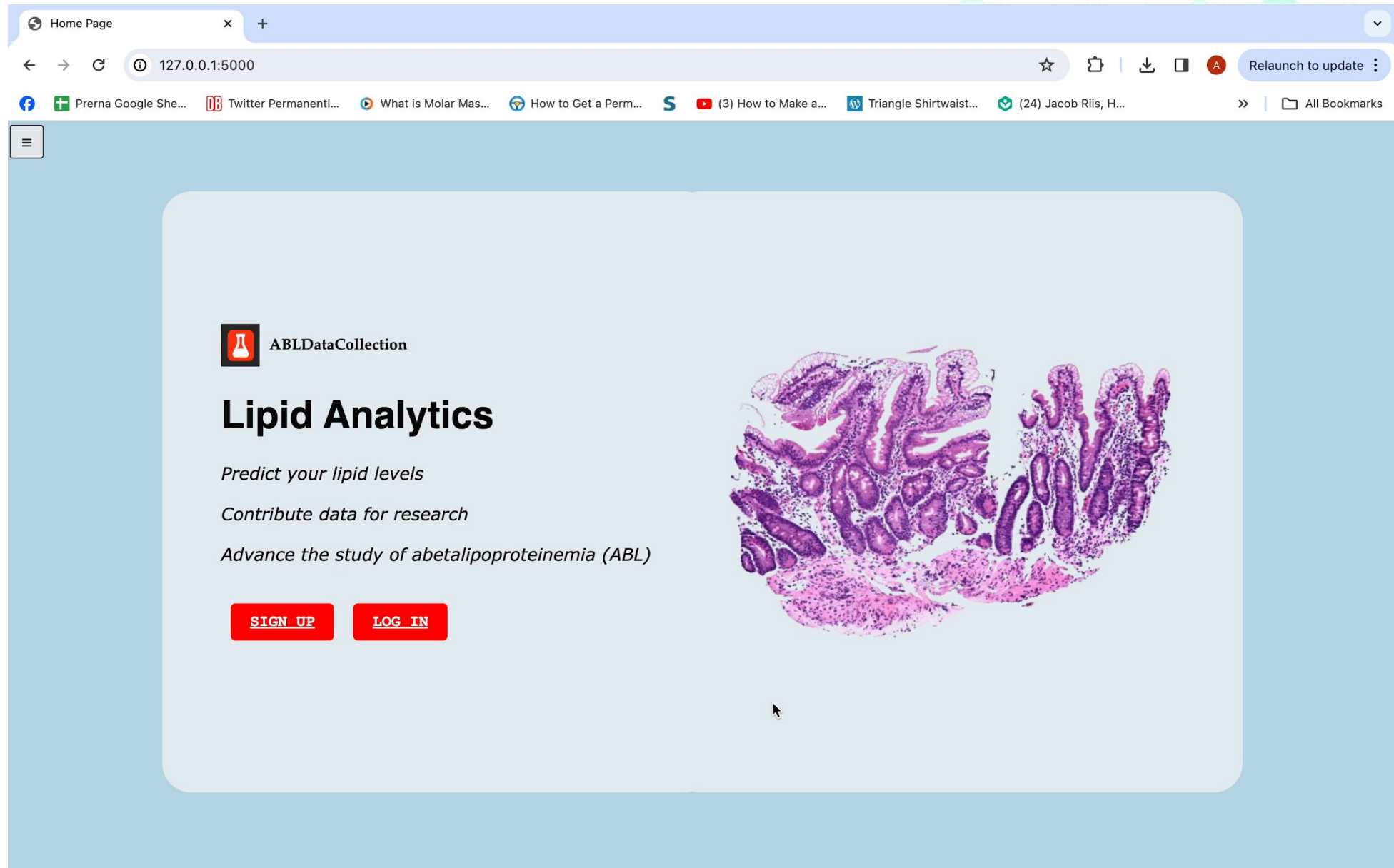
Frequency in data
set = 3/5867

Can estimate around
86 Americans
underdiagnosed

OUR CURRENT MODEL & OUTREACH



WEB-APP DEMO



PREDICTING LOW LIPID LEVELS IN ABL — CHALLENGES AND FUTURE DIRECTIONS

- Continue to research more definitive links between low lipid profiles and other commonly tested measurements to predict these more extreme lipid profiles
- Include a module component specifically for ABL patients to share data
- Validate and generalize our predictive model to translate to the paediatric population for early diagnosis and intervention
- Continue using our model to show that ABL is underdiagnosed, and hence provide compelling reason for lipid screening in infancy

The background of the slide is a dark gray color. It features an abstract design of numerous thin, light gray lines that crisscross the space. Overlaid on these lines are many circles of varying sizes. The circles are primarily in shades of green, with some in yellow and a few in a dark red or maroon color. The circles are scattered across the slide, with a higher concentration in the upper right and lower right areas.

THANK YOU

SPECIAL THANKS TO PAUL BIDERMAN AND CINDY BREDEFELD FROM ABL+

