

# HOW NASHVILLE BIOSCIENCES AND PFIZER IMPROVED THE EARLY-STAGE DRUG DISCOVERY PROCESS

Partnership Results in Faster Insights for Clinical Discoveries

## SITUATION

Early-stage drug discovery can be a time-consuming and expensive proposition. It's hard to gain buy-in and commitment for the cost and timeline required for an initial research query that may last for years, even for the most promising of treatments. So, how can we improve the process? How can we maintain the integrity of scientific and clinical research while dramatically shortening the pathway to the answers we need?

These are the questions Pfizer posed to Nashville Biosciences.

More specifically, Pfizer wanted to explore new genetic targets for treating a serious metabolic disease with greatly increased prevalence in recent years. The company was interested in developing a better understanding of the disease's natural history, particularly the genetic pathways and mechanisms that play a role in its onset and development.

Pfizer wanted quality insights more rapidly than the traditional research process could deliver and was looking for a partner who could provide comprehensive genetic datasets linked to de-identified medical records with years of longitudinal clinical data, as well as clinical and analytical expertise to support the overall design and execution of the research.

Pfizer chose to leverage Nashville Biosciences expertise and access to BioVU®, a biobank of millions of longitudinal medical records spanning over 10 years with hundreds of thousands of matched genetic samples.

“With Nashville Biosciences, we found the right pieces of the puzzle for an effective collaboration,” said Katrina Loomis, Senior Director, Target Sciences and Technologies at Pfizer. “For Pfizer it is important to have a partner with the data, appropriate ethical standards and safeguards, deep experience mining electronic medical records and physician expertise in the specific disease area we were researching.”



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## APPROACH

To address Pfizer's needs, Nashville Biosciences used de-identified, retrospective electronic medical record (EMR) data to rapidly select disease & disease-protected subject cohorts with multiple long-term clinical risk factors. It then performed DNA sequencing to help Pfizer identify new variants to guide further drug R&D.

## BENEFITS & RESULTS

### *Speed & Efficiency*

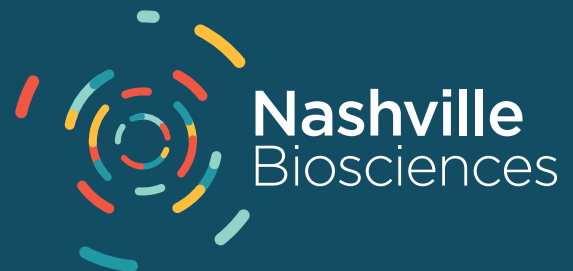
"By partnering with Nashville Biosciences who already had access to both EMR and genetic data we were able to cut about 12 months off our research timeline compared to recruiting new patients," said Loomis.

### *Flexibility & Responsiveness*

"In a study like this, you do your best to lay out a research plan, but you really don't know what to expect," said Loomis. "The Nashville Biosciences team was fantastic about adjusting the analysis plan on the fly and iterating with us to remine data or change course during the process so that we could find the exact cohort we needed."

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## ABOUT NASHVILLE BIOSCIENCES

Nashville Biosciences, a wholly owned subsidiary of Vanderbilt University Medical Center (VUMC), was created to harness the Medical Center's extensive genomic and bioinformatics resources for drug and diagnostics discovery and development. Leveraging Vanderbilt University Innovation™, Nashville Biosciences serves as a commercial interface between outside companies and the formidable research capabilities represented by BioVU®, one of the world's most comprehensive genetic databases linked to de-identified medical records with years of longitudinal clinical data. This unique asset is one of the largest and highest quality of its kind, providing an unprecedented opportunity to guide R&D activity in biotech, pharma, diagnostics, medical devices and other life sciences applications.

To learn more about Nashville Biosciences or to request a private demo of the organization's capabilities, please visit <http://www.nashville.bio>.