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PART OF REAL CHEMISTRY

Alnylam Pharmaceuticals

INTRODUCTION

Specialty and rare diseases are characterized by undefined patient populations that are regularly undiagnosed or misdiagnosed, healthcare providers who are unaware of disease states and their manifestations, as well as treatment journeys that are not well-understood. IPM.ai transforms real world data into real world insights to uncover the ideal patient and their healthcare ecosystem so that life sciences companies can accelerate the commercialization of life-saving therapies for specialty and rare diseases that lead to optimal patient outcomes quicker, with less risk.

THE CONDITION

Hereditary ATTR amyloidosis (hATTR) is a progressive condition caused by a mutation or error in the TTR (transthyretin) gene, resulting in the abnormal production of the TTR protein. TTR is generally produced in the liver and transports thyroxine (a hormone) and retinol (vitamin A) in the body, however, this abnormality causes amyloid fibrils deposits to present in tissues and organs, disrupting the functions of the nervous system, heart, and digestive tract. The condition is an autosomal dominant disease, and as such, can be inherited from a single parent. While more than 120 variants have been identified, certain variants reoccur more often in Portuguese, Swedish, Japanese, African, and Irish populations. An estimated 50,000 people worldwide have hATTR — though many more may go undiagnosed due to the complex symptomatology of the disease. hATTR patients suffer from a rare and fatal polyneuropathy.

THE CHALLENGE

Alnylam Pharmaceuticals commercialized Onpattro, the first-in-class treatment for this rare condition, however, the various manifestations of hATTR caused patients to seek multiple healthcare providers — creating a massive universe that Alnylam could potentially engage for disease education. To focus their efforts, the company sought to center on a specific subpopulation of patients with a genetic mutation not revealed in general healthcare claims data.

THE SOLUTION

IPM.ai incorporated Alnylam's anonymous patient-level laboratory data with our real world data universe of 300 million de-identified patients to define and build a profile of the ideal patient. We then employed machine learning and artificial intelligence to identify a previously unconsidered key treating specialty physician that revealed new, targeted health care providers.

THE OUTCOME

Alnylam engaged the new population of healthcare specialists and — after treating ~60 patients over 3 years — discovered 35 additional patients within 6 months. IPM.ai is credited with sourcing approximately 20% of all patients Alnylam has treated to date.

About IPM.ai

IPM.ai, part of Real Chemistry, is an Insights as a Service (IaaS) provider that empowers the world's leading life sciences companies to better understand and improve the lives of patients through the development and commercialization of precision medicine for specialty and rare diseases. IPM's system of insight optimizes drug development, clinical study, product launch and commercial operations through granular-level longitudinal analytics, artificial intelligence and machine learning in conjunction with a real world data universe of over 300 million de-identified patients and 65 billion anonymized social determinants of health signals.