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Inovio, Qiagen enter into a precision medicine partnership

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This precision medicine partnership focuses on Inovio's VGX-3100 with potential to become the first treatment for HPV infection of the cervix and the first non-surgical treatment for precancerous cervical lesions associated with the virus.



Inovio Pharmaceuticals and QIAGEN have announced a collaboration to co-develop a diagnostic test to identify patients most likely to respond to VGX-3100, Inovio's immunotherapy to treat advanced cervical dysplasia associated with the human papillomavirus virus (HPV). This precision medicine partnership focuses on Inovio's VGX-3100, a late-stage product candidate currently in two pivotal Phase 3 clinical trials (REVEAL 1 and 2) with potential to become the first treatment for HPV infection of the cervix and the first non-surgical treatment for precancerous cervical lesions associated with the virus. Financial arrangements were not disclosed.

Dr. J. Joseph Kim, Inovio's President & CEO, said, "As we advance our Synthetic Nucleics platform we are always looking for ways to drive innovation within our own technology or via a creative partner like QIAGEN. QIAGEN is bringing their extensive track record of commercially developing and marketing novel diagnostic tests to this important collaboration. Inovio is developing VGX-3100 as a non-surgical treatment for women with cervical pre-cancer and pre-treatment biomarkers we have discovered could provide a targeted way to identify patients most likely to respond to treatment with VGX-3100, increasing absolute efficacy of the product."

"We are pleased to support Inovio by developing a liquid biopsy-based companion diagnostic to identify patients who would benefit from VGX-3100, which has potential to make a dramatic difference in the treatment of HPV infections and precancerous disease. Our Sample to Insight workflows and experience in developing diagnostic solutions for Precision Medicine in immuno-oncology are well-suited to help Inovio address this large unmet medical need," saidPeer M. Schatz, Chief Executive Officer of QIAGEN. "Our team has deep experience in HPV-related molecular testing and cervical cancer and is looking forward to applying this expertise in partnership with Inovio, This project is also a case study of a collaboration that started in the discovery phase, when Inovio selected QIAGEN Genomic Services to work on the discovery of novel microRNA biomarkers that now contribute to the power of this unique molecular assay. The project progressed into development and Inovio now aims to make regulatory submissions for VGX-3100 in 2021."

HPV is the most common viral infection of the reproductive tract and the major cause of cervical cancer, the fourth most common cancer among women. The World Health Organization (WHO) reported an estimated 570,000 new cases of cervical cancer and 311,000 deaths in 2018. Almost 300 million women globally are estimated to be infected with HPV, and about 30 million additional cases have progressed to the precancerous stage. The high-risk HPV 16 and HPV 18 genotypes are estimated to cause at least 70% of cervical cancers.

Inovio's VGX-3100 is a novel immunotherapy under clinical investigation for the treatment of infection with HPV 16 and HPV 18 and advanced cervical dysplasia (Phase 3), and the vulva and anus (Phase 2). VGX-3100 propels the patient's own immune system to clear the HPV 16 and HPV 18 infections and precancerous lesions without the increased risks associated with surgery.