

## GE Healthcare to work on more precise cancer immunotherapies

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GE Healthcare and Vanderbilt University Medical Centre (VUMC) has announced a five-year partnership to enable safer and more precise cancer immunotherapies. Multiple diagnostic tools will be developed to help predict both the efficacy of an immunotherapy treatment and its adverse effects for a specific patient before the therapy is administered. This would allow physicians to better target immunotherapies to the right patients and avoid potentially damaging, ineffective and costly courses of treatments.

Immunotherapies use the immune system to recognize and attack cancer cells and can be more effective than traditional treatments, but response rates are often low and side effects can be severe. GE Healthcare and VUMC will retrospectively analyze and correlate the immunotherapy treatment response of thousands of VUMC cancer patients, with their anonymized demographic, genomic, tumor, cellular, proteomic and imaging data. They will then develop AI-powered apps that draw on this data to help physicians identify the most suitable treatment for each individual patient.

Simultaneously, GE Healthcare and VUMC will develop new positron-emission tomography (PET) imaging tracers, which together with the apps, will help physicians to stratify cancer patients for clinical trials. It currently takes an average of 12 years and costs almost \$2 billion to bring a drug to market. In many cases, inappropriate patients are recruited to participate in immunotherapy trials, incurring unnecessary expense and slowing down approvals of new therapies. It is hoped that the PET tracers will ultimately also be used to monitor the efficacy of immunotherapies in everyday practice.