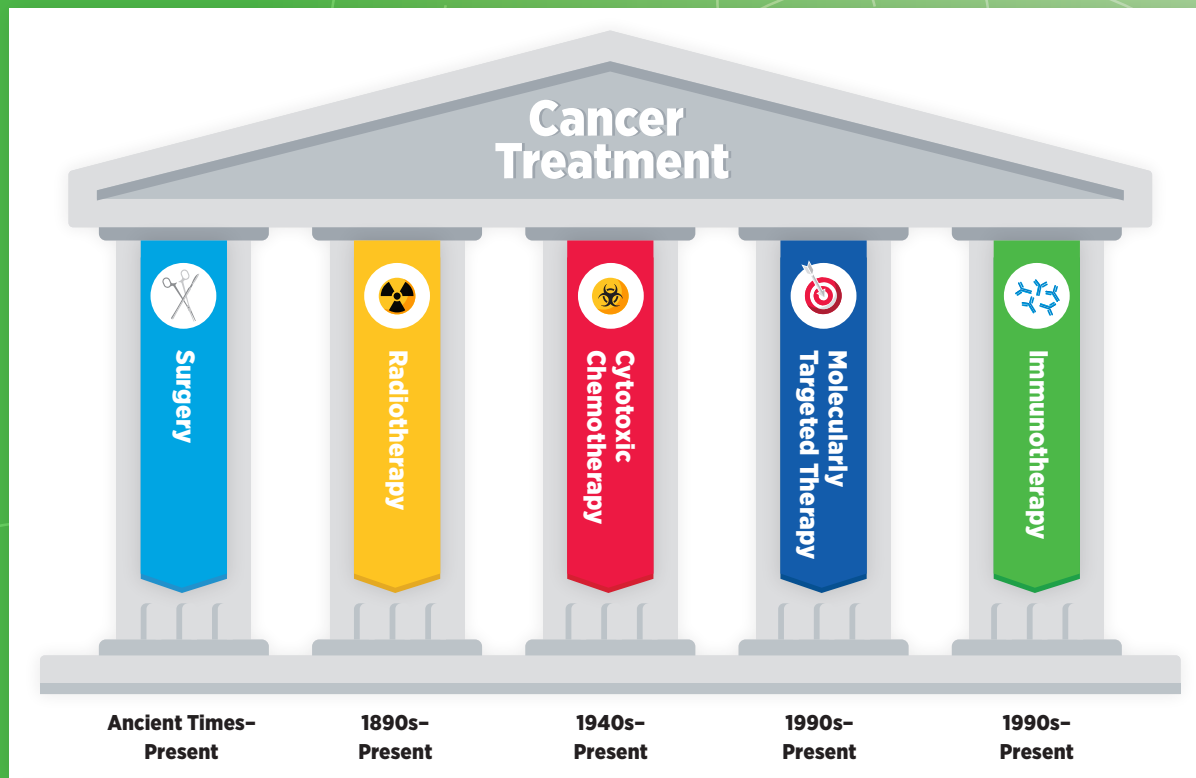


FIGURE 19

THE PILLARS OF CANCER TREATMENT



The cancer treatment paradigm is built upon what physicians often refer to as the “pillars” of cancer treatment. For centuries, surgery was the only treatment for cancer. In 1896, treatment of a breast cancer patient with X-rays added radiotherapy as the second pillar. The foundations for the third treatment pillar—cytotoxic chemotherapy—were established in the early 1940s when a derivative of nitrogen mustard was explored as a treatment for lymphoma. These three pillars—surgery, radiotherapy, and cytotoxic chemotherapy—continue to be critical

components of cancer treatment. Introduction of the first molecularly targeted therapeutics in the late 1990s led to the fourth pillar, molecularly targeted therapy. Also, in the late 1990s, decades of discovery science laid the groundwork for the fifth treatment pillar, immunotherapy. Continued evolution of new approaches, such as analysis of tumors aided by AI, enhanced molecular imaging, and validation of new biomarkers, plays a critical role in the development of each of these therapeutic areas.