Cardiotoxicity is a well-described and potentially lethal side effect of certain chemotherapeutic agents. Cardiotoxicity is a broad term used to depict conditions ranging from benign forms of arrhythmias to potentially fatal conditions, such as myocardial ischemia or infarction and heart failure. Anthracyclines (daunorubicin, doxorubicin, and epirubicin), mitomycin, and monoclonal antibodies such as trastuzumab have been associated with cardiotoxicities, but other chemotherapeutic agents, such as fluorouracil, cyclophosphamide, interferons, and interleukin-2 and other targeted agents, also can cause this side effect. Although several theories exist about the process that leads to cardiotoxicity from some chemotherapeutic agents, the exact mechanism of action is unknown. Oncology nurses should know the agents associated with cardiotoxicity, including newer targeted therapy drugs. Knowledge of the potential mechanism of action, as well as the possible reversibility of cardiotoxicity with specific agents, is important.