Two fully human monoclonal antibodies (mAbs) that target cytotoxic T lymphocyte-associated antigen 4 (CTLA4), tremelimumab and ipilimumab, are in clinical development for the treatment of advanced cancers. The investigational agents enhance T-cell activation and are hypothesized to generate antitumor immunity. Clinical data have shown that treatment with an anti-CTLA4 mAb is tolerable in most patients. In addition, enhanced antitumor activity was observed in some patients. As expected with an agent that enhances the immune response, immune-related adverse events are observed frequently in treated patients. The immune-related adverse events are not observed with standard chemotherapy agents, so many nurses may be unfamiliar with their management. Early recognition and management of immune-related adverse events by oncology nurses is an essential component of effective treatment with an anti-CTLA4 mAb. As immunomodulatory agents such as anti-CTLA4 mAbs are introduced in oncology treatment, nurses will need a greater understanding of the complexities associated with the therapies. Knowledge of immune system functions and how altering the functions may affect the development of side effects will enhance safety and quality of care for patients receiving anti-CTLA4 mAbs.