SITC is a non-profit organization comprised of influential basic and translational scientists, clinicians, health care professionals, government leaders and industry professionals around the globe. Through an emphasis on high-caliber scientific meetings, education and outreach activities, initiatives of major importance to the field, and commitment to collaborations, SITC aims to make cancer immunotherapy one of the four standards of care and the word “cure” a reality for cancer patients everywhere. Be a part of the future of cancer care, join SITC Today!
The History of Immunotherapy

Immunotherapy is a cancer treatment more than 100 years in the making, beginning most notably with Dr. William B. Coley, who worked with patients and doctors to study how cancer tumors reacted to bacterial infections. He treated cancer patients with inoperable tumors by injecting a combination of bacteria, which became known as Coley’s Toxins, directly into their tumors. His results showed that this kind of treatment shrank the tumors and sometimes even cured the patient. He believed that the body’s increased response to the bacteria also helped fight off the cancer. In the modern era, Dr. Donald Morton was an early proponent of immunotherapy, particularly cancer vaccines. His work with bacillus Calmette-Guerin (BCG) for melanoma led to the use – and eventual approval – of BCG for bladder cancer, the first successful immunotherapy treatment against a human tumor.

**MILESTONES**

1890 Dr. Coley creates the first immunotherapy treatment when he injects bacteria directly into inoperable tumors to stimulate an immune response that fights the cancer

1956 Tumor-specific cell antigens are discovered

1973 Dendritic cells are identified as “antigen-presenting cells” (APCs)

1978 • Bacillus Calmette-Guerin (BCG) is first studied as a possible treatment
• Interleukin-2 (IL-2) is discovered
• Tumor-specific monoclonal antibodies (mAbs) are discovered

1980 • Results from IL-2 and lymphokine activated killer cell (LAK) therapy in various tumors are first reported
• Adoptive T cell transfers are studied as a possible cancer treatment

1984 Society for Immunotherapy of Cancer (formerly SBT) is founded

1986 The Extramural IL-2/LAK Working Group is formed with funding from the National Cancer Institute to confirm results of the high-dose IL-2/LAK cell regimen in the treatment of melanoma and renal cell cancer

1988 First results for tumor-infiltrating lymphocytes (TILs) therapy are reported

1990 • Bacillus Calmette-Guerin is approved for bladder cancer
• First treatment with genetically modified TIL

1991 Sargramostim (Leukine), a granulocyte macrophage-colony stimulating factor (GM-CSF), is approved to boost white blood cell counts

1992 High dose IL-2 is approved to treat metastatic kidney cancer

1995 The first monoclonal antibody (mAb), rituximab (Rituxan), is approved to treat B cell malignancies

1999 Denileukin diftitox (Ontak), a fusion of IL-2 and diphtheria toxin, is approved to treat lymphomas

2000 The drug gemtuzumab ozogamicin (Mylotarg), which combines a mAb and a toxin from the bacteria Micromonaspora echinospora, is approved for AML

2009 Anti-CD20 monoclonal antibody of atumumab (Arzerra) is approved for CLL

2010 • The first therapeutic cancer vaccine, sipuleucel-T (Provenge), is approved for advanced prostate cancer
• Gemtuzumab ozogamicin is discontinued due to safety concerns and lack of benefit

2011 • Pegylated interferon (PEG-Intron) is approved for adjuvant therapy of selected melanoma patients
• Ipilimumab (Yervoy) is approved to treat advanced melanoma

2012 Several clinical studies of Tcell checkpoint inhibitors targeting PD-1 and PD-L1 demonstrate therapeutic activity in many types of cancers

2013 • The first phase III trial of oncolytic virus immunotherapy shows improvement in long-term response rate in melanoma patients
• The combination of agents targeting CTLA-4 and PD-1 checkpoints shows activity against melanoma

2014 • Blinatumomab (Blin costo), a monoclonal antibody, is approved for ALL
• Nivolumab (Opdivo), a PD-1 inhibitor, is approved for advanced melanoma
• Pembrolizumab (Keytruda) is the first PD-1 inhibitor approved for advanced melanoma
• Ramucirumab (Cyramza), a monoclonal antibody, is approved for advanced gastric and lung cancers

2015 • The first biosimilar product, filgrastim-sndz (Zarxio), is approved to treat severe chronic neutropenia
• Nivolumab (Opdivo) is the first checkpoint inhibitor approved for lung cancer
• Ramucirumab (Cyramza) is approved for metastatic colorectal cancer