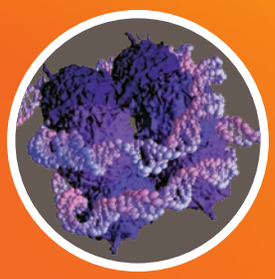
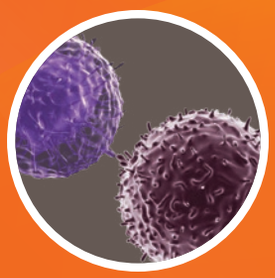
Explore our science



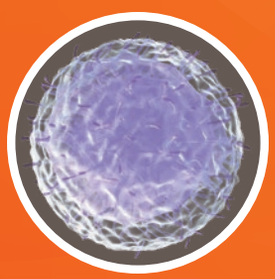
Immuno-Oncology

Immuno-oncology harnesses the body's own immune system to fight cancer by using different immunological pathways to enhance antitumor responses.[1,2] GSK is studying multiple therapies that augment the immune response, reduce immune suppression, and modulate the tumor microenvironment.



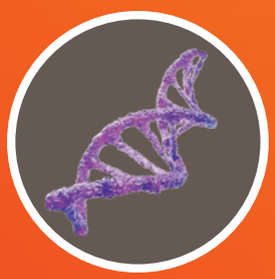
Oncology Cell Therapy

Oncology cell therapy uses adoptive cell transfer of engineered T cells that may mediate antitumor effects.[3] GSK is exploring a number of adoptive cell therapies, including engineered TCR T cells and CAR T cells.



Cancer Epigenetics

Aberrant gene expression, regulated in large part by epigenetic mechanisms, is a hallmark of cancer.[4] GSK is working on developing a number of molecules that may help regulate aberrant gene expression.



Genetic Medicine

Defects in DNA repair, the accumulation of DNA damage, and genomic instability are pervasive characteristics of human tumors.[5,6] GSK is exploring inhibition of pathways that contribute to aberrant DNA repair in cancer cells, a promising area of research for increasing the effectiveness of current therapies and the discovery of treatment options.

Scan this code to view or download a copy of the GSK oncology pipeline brochure or visit **GSKoncologyRD.com/brochure**

See next page for select GSK-sponsored clinical trials currently underway

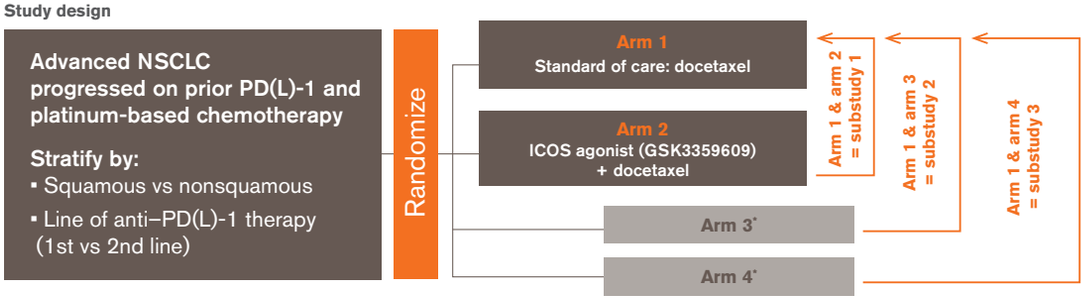
1. PhRMA. Medicines in development for immuno-oncology 2017 report. https://www.phrma.org/medicines-in-development-immuno-oncology. Accessed January 30, 2019. **2.** Finn OJ. Immuno-oncology: understanding the function and dysfunction of the immune system in cancer. *Ann Oncol.* 2012;23(suppl 8):viii6-viii9. **3.** Perica K, Varela JC, Oelke M, Schneck J. Adoptive T cell immunotherapy for cancer. *Rambam Maimonides Med J.* 2015;6(1):e0004. doi:10.5041/RMMJ.10179. **4.** Wyce A, Ganji G, Smitheman KN, et al. BET inhibition silences expression of MYCN and BCL2 and induces cytotoxicity in neuroblastoma tumor models. *PLoS One.* 2013;8(8):e72967. doi:10.1371/journal.pone.0072967. **5.** Lord CJ, Ashworth A. The DNA damage response in cancer therapy. *Nature.* 2012;481(7381):287-294. **6.** O'Connor MJ. Targeting the DNA damage response in cancer. *Mol Cell.* 2015;60(4):547-560.

Select GSK-sponsored clinical trials

Entrée-Lung: platform trial of novel regimens versus standard of care in NSCLC[1]

ICOS agonist IgG4 antibody (GSK3359609)[1,2]

Study design



Key inclusion criteria:

- Advanced NSCLC in 2nd line, or 3rd line in subjects with *BRAF* mutations
- Measurable disease
- Prior maximum of 1 line of platinum-containing chemotherapy regimen
- Prior maximum of 1 line of PD(L)-1 mAb
- Known *BRAF* mutations allowed after disease progression on local SOC for the molecular alteration

Key exclusion criteria:

- Prior treatment with docetaxel or ICOS agonist
- ≥3 lines of therapy for NSCLC, including subjects with *BRAF* mutations
- Symptomatic CNS metastases
- Prior allogeneic/autologous bone marrow or solid organ transplantation

*Additional regimens/arms may be added via future protocol amendment(s).

BRAF, B-Raf proto-oncogene, serine/threonine kinase; CNS, central nervous system; ICOS, inducible T-cell costimulator; IgG4, immunoglobulin G4; mAb, monoclonal antibody; NSCLC, non-small cell lung cancer; PD(L)-1, programmed cell death (ligand) 1; SOC, standard of care.
Randomization of participants to experimental regimens may not occur in parallel.

Phase 2
NCT03739710

Non-small cell lung cancer (NSCLC)

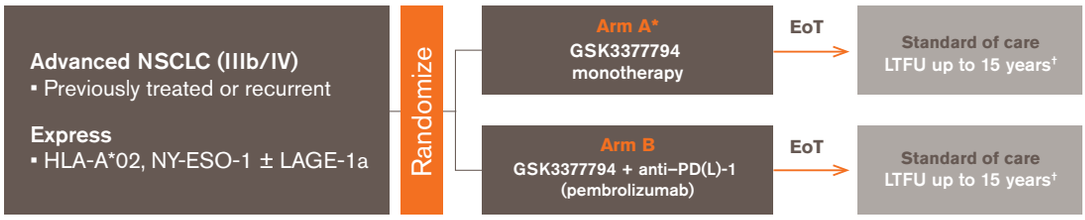
Study molecule **(GSK3359609) ICOS agonist IgG4 antibody**

Status recruiting

NY-ESO-1 ± LAGE-1a-positive advanced/recurrent NSCLC alone or in combination with pembrolizumab[3,4]

Autologous engineered TCR T cells targeting NY-ESO-1 ± LAGE-1a (GSK3377794)

Study design



Key inclusion criteria:

- Previously treated, advanced (IIIb/IV), or recurrent NSCLC
- Measurable disease
- Predicted life expectancy ≥3 months
- LVEF ≥50%
- Expression of NY-ESO-1 ± LAGE-1a
- Suitable for leukapheresis/lymphodepletion

Key exclusion criteria:

- ≥3 lines of prior systemic therapy
- Prior treatment with TCR T cell or CAR T cell therapy; prior integrating vector gene therapy
- Symptomatic or untreated leptomeningeal or brain metastases or spinal cord compression
- Prior malignancy other than NSCLC
- Prior allogeneic/autologous bone marrow or solid organ transplantation with some exceptions if occurred more than 5 years ago

*Option of rescue with pembrolizumab at time of progressive disease based on risk/benefit evaluation.
†LTFU requires participant enrollment in a dedicated LTFU protocol.

CAR, chimeric antigen receptor; EoT, end of therapy; HLA, human leukocyte antigen; LAGE-1a, cancer-testis antigen 2; LTFU, long-term follow-up; LVEF, left ventricular ejection fraction; NSCLC, non-small cell lung cancer; NY-ESO-1, New York esophageal squamous cell carcinoma 1; PD(L)-1, programmed cell death (ligand) 1; TCR, T-cell receptor.

Phase 1b/2a
NCT03709706

Non-small cell lung cancer (NSCLC)

Study molecule **NY-ESO-1 TCR T cells (GSK3377794)**

Status recruiting

Learn more about additional trials—visit us at booth 22097

1. ClinicalTrials.gov. Phase II platform trial of novel regimens versus standard of care (SoC) in non-small cell lung cancer (NSCLC). https://clinicaltrials.gov/ct2/show/NCT03739710. Updated February 18, 2019. Accessed April 24, 2019. **2.** Angevin E, Barnette MS, Bauer TM, et al. INDUCE-1: a phase I open-label study of GSK3359609, an ICOS agonist antibody, administered alone and in combination with pembrolizumab in patients with advanced solid tumors [abstract 3113]. *J Clin Oncol*. 2017;35(15)(suppl). doi:10.1200/JCO.2017.35.15_suppl.TPS3113. **3.** ClinicalTrials.gov. Pilot immunotherapy with autologous T-cells specific for New York esophageal antigen-1 (NY-ESO-1)/cancer-testis antigen-2 (LAGE-1a)-positive advanced non-small cell lung cancer (NSCLC) either alone or in combination with pembrolizumab. https://clinicaltrials.gov/ct2/show/NCT03709706. Updated February 11, 2019. Accessed April 24, 2019. **4.** GSK Data on File. 205801. GSK Clinical Study Register. Study entry at https://www.gsk-studyregister.com/study/19938. Accessed May 6, 2019.

This information is intended for healthcare providers only. Compounds are investigational. Inclusion does not imply regulatory approval for these compounds or indications. Information about all GSK-sponsored trials can be found at www.clinicaltrials.gov.