

This document provides a short summary of this study for a general audience. You can find more information in scientific summaries of the study. Links to those summaries are provided at the end of this document.

Study names

Short Title: An imaging study in healthy volunteers to understand where GSK3128349 goes in the body.

Full Scientific Title: An open label positron emission tomography (PET) imaging study using ⁸⁹Zirconium labelled GSK3128349 to investigate the biodistribution of an albumin binding domain antibody (AlbudAb) GSK3128349 following single dose intravenous administration in healthy male subjects.

Who sponsored this study?

GlaxoSmithKline (GSK)
GSK Clinical Support Help Desk
Website: www.clinicalsupporthd.gsk.com
Email: GSKClinicalSupportHD@gsk.com

General information about the clinical study

When and where was this study done?

The study started in August 2016 and ended in January 2017. All volunteers went to the same study site in the Netherlands.

What were the reasons for studying this molecule?

Some medicines pass through the body quickly because they are very small. Patients often need to take a number of doses to get the benefits. Researchers want to know if some medicines could be attached to an antibody that would attach to a natural protein in the body. The medicine, when linked to the antibody and the protein, might stay in the body longer so patients wouldn't need to take the medicine as often.

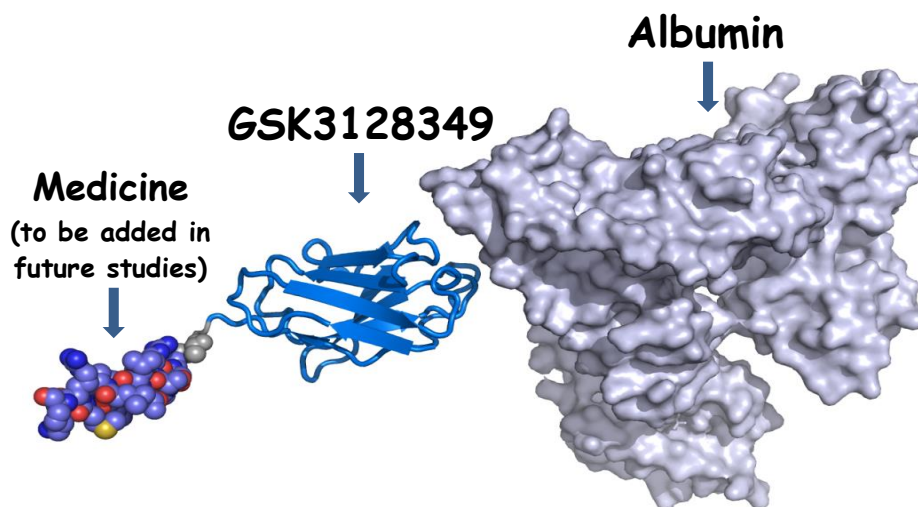
What was the purpose of this study?

This was a Phase I study. Phase I studies are usually the first time a new medicine or molecule is given to people. This study was designed to measure biodistribution of an antibody that binds to a protein called albumin. Biodistribution is where a molecule goes in the body.

Researchers will look at the results of this study, as well as other Phase I studies, and decide whether additional studies are needed. Researchers want to understand more about the safety of the antibody, how long it stays in the body, and what other substances could be attached to it.

Which molecule was studied?

GSK3128349 isn't a medicine, it is a molecule. Scientists call molecules like GSK3128349 albumin-binding domain antibodies or AlbudAb for short. GSK3128349 attaches to albumin. Albumin is made naturally in the liver and carries hormones and nutrients in the blood.



In this study, no medicines were attached to GSK3128349. Researchers wanted to learn where GSK3128349 goes in a human body. They used a radioactive label called ⁸⁹Zirconium so they could see the molecule on scans. The PET-CT scans measure the radiolabel. Researchers assumed that GSK3128349 remained bound to the radiolabelled GSK3128349 throughout the study.

PET-CT scans were used to follow radiolabelled GSK3128349 in the body. A PET scan produces three-dimensional images of the inside of the body. A CT scan shows pictures of a person's body in very thin sections.

Which people were included in this study?

Eight healthy male volunteers received one dose of radiolabelled GSK3128349. The youngest volunteer was 53 years old and the oldest was 60. The average age of the volunteers was 55.

What were the overall results of the study?

The volunteers received radiolabelled GSK3128349 through a needle in a vein (intravenous (IV) infusion). The volunteers stayed in the clinic for 24 hours after their dose. Four PET-CT scans were performed within 12 days of the dose.

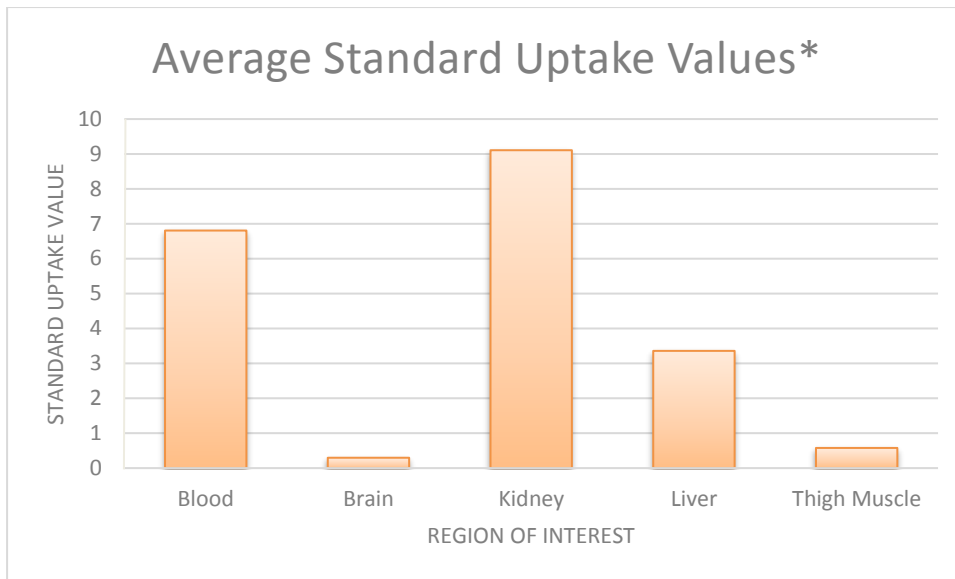
Researchers focused on certain parts of the body (these are called Regions of Interest or ROIs). The Regions of Interest included the blood, brain, kidney, liver, and thigh muscle. The results from the four PET-CT scans were used to estimate the following:

- Standardised Uptake Values (SUVs) in the Regions of Interest.
- Volume of GSK3128349 in the Regions of Interest.

Standardised Uptake Values (SUVs) are calculated with a mathematical equation that compares the concentration of the radiolabel in the region of interest with the concentration in the rest of the body. A higher SUV means a higher concentration in the region of interest. A higher concentration is like the difference between a strong and a weak cup of tea.

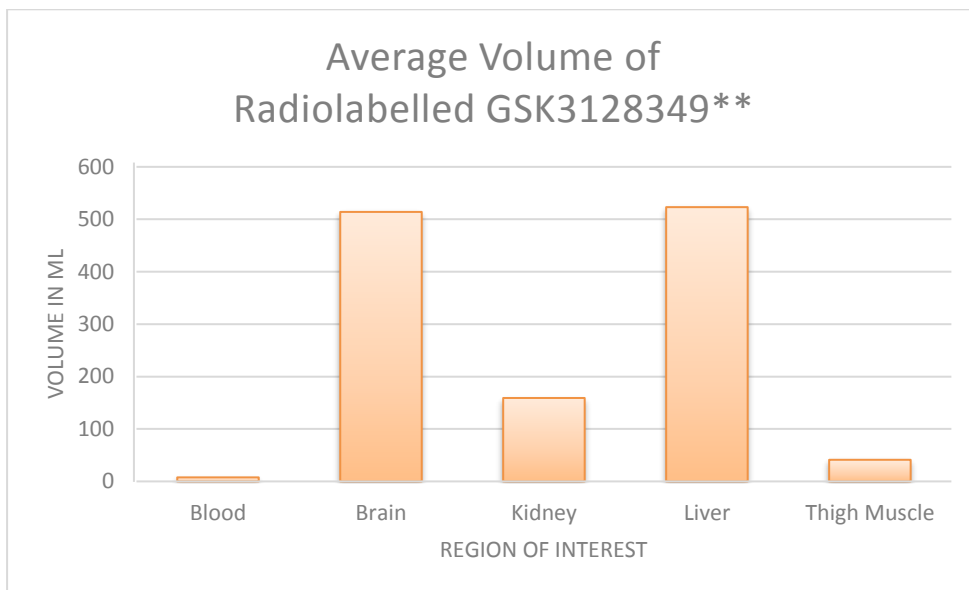
The volume of radiolabelled GSK3128349 in each region of interest is measured in millilitres (mLs). Volume measures the amount of space that a substance occupies in a container, or in this case, in the Region of Interest.

Across the four PET-CT scans, the average concentration of radiolabelled GSK3128349 was highest in the kidneys and blood and lowest in the brain.



*Standard Uptake Values are a measure of concentration

Across four PET-CT scans, the average volume of radiolabelled GSK3128349 was highest in the liver and lowest in the blood.



**Volume is the amount

What were the side effects?

Study doctors collect information about the safety of study medicines. They document the side effects that are reported by volunteers during the study. If they believe that the side effect was caused by the intervention, they note

that as well. This summary reports adverse events that may have been related to the molecule. These are called adverse reactions.

- An **adverse reaction** is a medical problem that develops during the study that the doctor thinks could have been caused by the study medicine.
- A **serious adverse reaction** is an adverse reaction that is life threatening, requires hospitalisation, or results in death or permanent damage.

In this study, three adverse events were reported. The investigator did not think that they were related to radiolabelled GSK3128349, therefore no adverse reactions were reported in this study.

How has this study helped patients and researchers?

This study looked at how radiolabelled GSK3128349 was distributed in the body. The molecule was well tolerated by the volunteers.

Are there plans for further studies?

Future studies will collect more information about the safety of GSK3128349 and find out what happens when it is attached to a medicine or another small molecule or protein. The methods used in this study can also help researchers design studies of other types of protein-based therapies.

Where can I find more information about this study?

Clinical studies have unique study numbers that are included in publications and other information about the study. The unique study numbers associated with this study are shown below with internet links to scientific summaries and other information.*

The scientific summaries will include more details about the requirements for study enrolment, the study visit schedule, results from other endpoints, and more detailed information about adverse events.

Organization	Website	Study Number
United States National Institutes of Health (NIH)	www.clinicaltrials.gov	NCT02829307
GlaxoSmithKline (GSK)	www.gsk-clinicalstudyregister.com	117169

*For readers of this document in printed form, the websites that go with the internet links above are

<https://clinicaltrials.gov/ct2/show/NCT02829307>

https://www.gsk-clinicalstudyregister.com/search/?study_ids=117169

We would like to thank the volunteers who contributed to this study. The results of this study will help answer scientific questions about how molecules are distributed in the body.

This document was developed and approved by GSK on 4 December 2017. The information in this summary does not include additional information available after this date.