

# The SAP Scan

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**This Infosheet explains what a SAP scan is, how it works and why it is used in AL amyloidosis.**

## What is SAP?

Serum amyloid P component (SAP) is a normal protein found in the blood that binds to amyloid deposits. In healthy people there are very small amounts of SAP and this is only present in the bloodstream. In AL amyloidosis patients, in addition to the small quantities of SAP in the blood,

there are large quantities of SAP coating the amyloid deposits in the affected organs.

The SAP scan is available at the NHS National Amyloidosis Centre, London, and is performed routinely in most patients who are referred there for evaluation of AL amyloidosis.

## How does the SAP scan work?

A small amount of SAP is tagged with a radioactive iodine tracer and is injected into a vein. The tagged SAP then binds to amyloid deposits within the organs of the body. A scan is then performed 6 – 24 hours later to show these deposits and the amount and location of amyloid within the body. During the SAP scan, the coated amyloid deposits show up clearly, as if they have been highlighted or labelled.

The scanner is an open device on which patients lie, fully clothed for about 40 minutes.

Unfortunately, hollow or moving organs such as the gastrointestinal tract (stomach or intestines) and heart cannot be assessed reliably by the SAP scan. However, it is still important to look for amyloid in other organs in patients who have known or suspected amyloid in their gastrointestinal tract or heart. Amyloid in skin and nerves also may not be clearly shown by the scan.

## Is the SAP scan safe?

The amount of radiation is similar to that of a routine X-ray. The radiation dose is further reduced by giving potassium iodide before the procedure. This is a natural

mineral that reduces absorption of radiation. The SAP protein itself has been purified from healthy blood donors and has been tested and treated, as all donated blood products are, to minimise any risk of infection or contamination.

## Why is the SAP scan used?

The SAP scan can show the amount and location of amyloid within the body without the need for invasive biopsies. Most patients with AL amyloidosis have at least some amyloid in more than one organ, even when those organs appear to be functioning normally. To test all organs for amyloid would involve many biopsies and this would be unpleasant and possibly unsafe.

The SAP scan can provide a whole body overview, and can monitor changes in the amount of amyloid and response to treatment over months and years. In this way, the SAP scan has reduced the need for biopsies as a way of monitoring the disease. The SAP scan may be repeated every 6 – 12 months to monitor the amount and location of the amyloid deposits and therefore help guide the need for ongoing treatment.

Through the use of the SAP scan it has been found that amyloid

deposits often decrease and break up when the underlying plasma cell disease is controlled. This is usually accompanied by an improvement in general health.

### **In summary**

Doctors at the National Amyloidosis Centre have performed many thousands of SAP scans since the test was devised in 1987. Through these scans, doctors have gathered a large amount of information that will continue to guide treatment decisions and improve understanding of AL amyloidosis.

### **About this Infosheet**

The information in this Infosheet is not meant to replace the advice of your medical team. They are the people to ask if you have questions about your individual situation. All Myeloma UK publications are extensively reviewed by patients and healthcare professionals prior to publication.

### **Other information available from Myeloma UK**

Myeloma UK provides a wide range of information covering all aspects of the treatment and management of AL amyloidosis.

For a full publication list visit [www.myeloma.org.uk/publications](http://www.myeloma.org.uk/publications)

To order your free copies contact Myeloma UK. Our information is also available to download at [www.myeloma.org.uk](http://www.myeloma.org.uk)

To talk to one of our Myeloma Information Specialists about any aspect of AL amyloidosis, call the Myeloma Infoline on **0800 980 3332** or **1800 937 773** from Ireland.

Information and support about AL amyloidosis is also available around the clock at [www.myeloma.org.uk/amyloidosis](http://www.myeloma.org.uk/amyloidosis)

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Published by: Myeloma UK  
Publication date: May 2009  
Last updated: August 2016  
Review date: August 2018

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