

Solitary plasmacytoma

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This Infosheet explains what a solitary plasmacytoma is, what causes it, what the signs and symptoms are, what diagnosis involves and how it is treated.

What is a plasmacytoma?

A plasmacytoma is a localised build-up of abnormal plasma cells that occurs either inside bone or in soft tissue.

Plasma cells are a type of white blood cell which forms part of the immune system. Plasma cells are normally found in the bone marrow, which is the soft spongy tissue found in the centre of bones.

The plasma cells associated with plasmacytomas are malignant

(cancerous). Plasmacytomas can sometimes occur as part of a plasma cell cancer called myeloma.

A solitary plasmacytoma, however, is a single mass of abnormal plasma cells in one place in the body.

There are two kinds of solitary plasmacytoma. One kind is found inside the bone and is called a solitary bone plasmacytoma (SBP). The other kind is found outside

the bone, in the soft tissue and is called a solitary extramedullary plasmacytoma (SEP).

Some patients diagnosed with a solitary plasmacytoma will go on to develop myeloma. For this reason patients are monitored regularly for signs and symptoms that may indicate progression to myeloma.

Who can get a solitary plasmacytoma?

Solitary plasmacytomas are uncommon, with only about 300 cases per year in the UK, and they make up less than 1% of all blood cancers. They are twice as common in men as in women and SEP is less common than SBP.

A solitary plasmacytoma most commonly occurs in people later in life – the median age at diagnosis is 68. It is very rare in those under the age of 30.

What causes a solitary plasmacytoma?

The cause or causes of solitary plasmacytoma are unknown.

What are the signs and symptoms of a solitary plasmacytoma?

Solitary bone plasmacytoma

The most common sites for an SBP are in the spine. The first symptoms patients notice are usually pain and tenderness in the affected bone.

Solitary extramedullary plasmacytoma

Over 80% of SEP occurs in the head and neck region, particularly in the upper airways (nose, throat and sinuses), but may also be found in the gastrointestinal tract, lymph nodes, bladder, lung or other organs. The symptoms will depend on where the SEP is located: for example, you may experience difficulty with swallowing if the SEP is found in the throat.

How is solitary plasmacytoma diagnosed?

A person is diagnosed with a solitary plasmacytoma when:

- A biopsy reveals a single mass of abnormal plasma cells either inside the bone or soft tissue
- X-rays or other scans (e.g. MRI) show no other lesions in the bone or in the soft tissue

- A bone marrow biopsy shows no evidence of abnormal plasma cells in the bone marrow (or very low levels of less than 10%)
- Blood tests show no signs of myeloma-related complications such as anaemia, high calcium or reduced kidney function

How are solitary plasmacytomas treated?

Radiotherapy

The most common treatment for both for both types of solitary plasmacytoma is radiotherapy. The aim of treatment is to direct enough radiation to the tumour to kill as many of the plasmacytoma cells as possible, while minimising damage to nearby tissues. The radiation is similar to an X-ray but more powerful. It is generally given over several days to reduce the impact of any side effects. Each dose of radiotherapy is known as a 'fraction'. Most patients will find that their bone pain improves after radiotherapy. In a few patients, pain may persist after treatment, but this is likely to be because of bone damage that has already taken place.

Chemotherapy

Chemotherapy drugs (a group of drugs intended to kill cancer cells) are not commonly used in solitary plasmacytoma. However, some patients may be given chemotherapy in addition to radiotherapy.

Surgery

In some patients with SEP, some or all of the tumour may be removed surgically when the tumour is first found. This will be followed up with radiotherapy.

In patients with SBP, surgery may be used to treat or avoid complications caused by the SBP. This could include repairing breaks in the affected bone, or stabilising the spine. Surgery may also be needed if the tumour is causing compression of the spinal cord. SBP patients who have undergone surgery will also receive radiotherapy.

How are patients with solitary plasmacytoma monitored?

Radiotherapy generally provides excellent local control of a solitary plasmacytoma. However, there does remain the risk of a future recurrence, or progression to myeloma. For this reason patients with a solitary plasmacytoma need

long-term follow up. This generally occurs in the hospital outpatient department and will involve regular checks and blood tests.

What is the risk that solitary plasmacytoma will progress to myeloma?

Myeloma is a different cancer from plasmacytoma. In myeloma, there are more abnormal plasma cells in the bone marrow (more than 10%). The plasma cells in myeloma, and the abnormal proteins they produce, cause symptoms around the body such as kidney damage and anaemia.

Some patients with solitary plasmacytoma will go on to develop myeloma. The reasons for this happening are not well understood. In general, the risk is lower with SEP than SBP. Several other factors have also been identified which may make it more or less likely that a patient with solitary plasmacytoma will develop myeloma. The risk may be increased by:

- Presence of some abnormal plasma cells in the bone marrow
- Presence of a type of protein called free light chain (FLC) in the urine
- Older age

● Larger sized plasmacytoma

These are estimates of risk only, for whole groups of patients. Doctors can't be certain whether any specific patient will progress to myeloma.

Future directions

At present there are a lack of studies into treating solitary plasmacytoma with drugs as well as radiotherapy (and surgery). A large clinical called IDRIS is taking place at various centres around the UK, likely to be ongoing until late 2021. The purpose of this trial is to see whether giving two drugs (lenalidomide (Revlimid®) and dexamethasone) after radiotherapy to patients with SBP will improve their outcome.

For an up-to-date list of UK clinical trials involving plasmacytoma patients, visit the [Myeloma Trial Finder](https://myeloma.org.uk) at myeloma.org.uk

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.

For a list of references used to develop our resources, visit myeloma.org.uk/references

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Myeloma UK has a range of publications available covering all areas of myeloma, its treatment and management. Download or order them from myeloma.org.uk/publications

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

The Infoline is open from Monday to Friday, 9am to 5pm and is free to phone from anywhere in the UK and Ireland.

Information and support about myeloma is also available around the clock at myeloma.org.uk

Notes

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Call the Myeloma Infoline on

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