

Intrathecal Chemotherapy

Information for patients, relatives and carers

ⓘ For more information, please contact:
The Chemotherapy Team, Magnolia Centre
Telephone: 01904 725591

York Hospital, Wigginton Road, York, YO31 8HE

Intrathecal Chemotherapy

In some conditions such as leukaemia or lymphoma (cancer which starts in the bone marrow or lymph system), cancer cells can pass into the fluid which surrounds the brain and spinal cord. The fluid is known as cerebrospinal fluid or CSF. To prevent this from happening, or to treat it if it occurs, chemotherapy may be given into the CSF.

Your doctor has prescribed intrathecal chemotherapy (which is cytotoxic or cell toxic treatment) for your condition. This means that you will have chemotherapy drugs given by injection into the fluid around the spinal cord by a lumbar puncture procedure.

The chemotherapy drugs used are methotrexate and cytarabine arabinoside (ARA-C). Occasionally hydrocortisone is also given which is a steroid.

Methotrexate is yellow in colour.

Cytarabine comes in two forms:

- Liposomal - which is cloudy.
- Non-Liposomal - which is clear.

If liposomal cytarabine is used you should also be given oral dexamethasone for five days starting on the day of the injection.

What will happen?

- Before receiving this treatment the procedure will be explained verbally as well as through this leaflet.
- You will be asked to sign a consent form for the procedure (FY03CON33-3 Intrathecal Chemotherapy). In signing the form you are showing that you understand what is to be done and confirming that you wish to proceed. Make sure that you are given the opportunity to discuss any concerns and to ask any questions you may still have before signing the form.
- Because this is a special procedure you will be moved to either the Haematology Ward or the Haematology Outpatients Department whilst it takes place. Only specially trained staff will be involved.
- If you wish to see the injection before it is given, please ask.

Having an Intrathecal Injection (into the fluid around the spinal cord)

There are two usual positions for this procedure:

Lying Down

You will be asked to lie on your side, with your knees drawn up to your tummy and held in place by your hands. The nurse will support you in this position by gently holding you behind your knees and neck.

Sitting Down

You will be asked to sit with your back facing the doctor, your arms folded, supported over some pillows or the back of a chair, with your head resting on your arms.

The procedure in either position continues as follows:

- It is important that you remain very still, but do tell the doctor how you are feeling throughout the procedure.
- The doctor will use local anaesthetic to numb an area of skin over your spine.
- A needle is then inserted into the space between two of the spinal bones and into the CSF.
- The intrathecal chemotherapy will be put in with a small syringe.
- The needle will be taken out and a small dressing put over the area.
- This procedure takes from 15 to 30 minutes and you will need to lie flat afterwards for at least one hour.

Are there any alternatives?

The only alternative to intrathecal treatment is high dose intravenous methotrexate. This requires a stay in hospital of several days and not all patients are fit enough for this treatment. There is no good evidence which method of administration of methotrexate is the

best to protect against central nervous system disease and for this reason both intrathecal and high dose intravenous treatment may be recommended.

What are the risks of having Intrathecal Chemotherapy?

The common side-effects of having a lumbar puncture include a headache and dizziness. This can be reduced by lying flat for at least an hour following your procedure.

There is a very small risk of infection and bleeding.

Methotrexate and standard cytarabine do not usually cause any side-effects when administered intrathecally. There is a very small risk that Liposomal cytarabine can cause a headache, neck pain and back pain (arachnoiditis). This can be prevented by taking oral dexamethasone for five days starting on the day of your procedure.

In the past, there have been incidences in other hospitals of the wrong drug, vincristine, being administered. This can be fatal. The NHS and this Trust have very robust safety measures in place to prevent this from happening again. If you wish to check the drug before it is administered to you please inform the staff. If you are unclear or have any further questions please feel free to ask your doctor or nurse.

Tell us what you think of this leaflet

We hope that you found this leaflet helpful. If you would like to tell us what you think, please contact The Haematology Nursing Team, York Hospital, Wigginton Road, York, YO31 8HE or telephone 01904 725815.

Teaching, training and research

Our Trust is committed to teaching, training and research to support the development of health and healthcare in our community. Healthcare students may observe consultations for this purpose. You can opt out if you do not want students to observe. We may also ask you if you would like to be involved in our research.

Patient Advice and Liaison Service (PALS)

PALS offers impartial advice and assistance to patients, their relatives, friends and carers. We can listen to feedback (positive or negative), answer questions and help resolve any concerns about Trust services.

PALS can be contacted on 01904 726262, or email yhs-tr.patientexperienceteam@nhs.net.

An answer phone is available out of hours.

Leaflets in alternative languages or formats

If you would like this information in a different format, including braille or easy read, or translated into a different language, please speak to a member of staff in the ward or department providing your care.

Patient Information Leaflets can be accessed via the Trust's Patient Information Leaflet website:

www.yorkhospitals.nhs.uk/your-visit/patient-information-leaflets/

Owner	Dr Laura Munro, Consultant Haematologist
Date first issued	January 2004
Review Date	February 2029
Version	4 (reissued February 2026)
Approved by	Chemotherapy Development Group
Linked consent form	FY03CON33-3 Intrathecal Chemotherapy v2.5
Document Reference	PIL 521 v4.5
© 2026 York and Scarborough Teaching Hospitals NHS Foundation Trust. All Rights reserved.	