

Information for patients



Chemosaturation – PHP (Percutaneous Hepatic Perfusion) (CS-PHP)

Leading Interventional Oncology Network

Contents

What is CS-PHP?	3
Why is Chemosaturation CS-PHP important?	3
How is Chemosaturation CS-PHP different from other treatments?	4
How is it done?	4
Meeting with your Doctor	4
Scans and Tests	4
The Day Before Your Procedure	4
The Day of Your Procedure	5
Your Procedure	5
After Your Procedure	5
What are the risks associated with CS-PHP?	6
Consent	7
Who will perform the procedure?	7
How long will the procedure take?	7
Contact Details	8

What is Chemosaturation therapy (CS - PHP)?

You have been selected by your doctor to have Chemosaturation therapy (CS-PHP) treatment for your liver tumour. Chemosaturation therapy (CS-PHP) is a new method of treating cancers in the liver. This new treatment approach delivers concentrated doses of an anti-cancer drug directly to the liver while potentially allowing for manageable side effects.

Chemosaturation Therapy (CS-PHP) has been shown to help slow, or reverse the progression of tumours from certain cancers in the liver. Chemosaturation Therapy (CS-PHP) is a repeatable treatment that may help doctors manage cancers in the liver for appropriate patients. This technique delivers very high doses of chemotherapy directly to the liver, and the chemotherapy used (Melphalan) has been available for several years.

- CHEMOSAT is the first treatment to deliver high amounts of anti-cancer drugs directly to your liver without surgery
- CHEMOSAT can be used more than once, as long as your doctor feels it may be appropriate.
- CHEMOSAT works well even if you have many cancers in your liver

Why is Chemosaturation therapy (CS-PHP) important?

Liver cancers may originate in the liver or spread to the liver from other parts of the body. Because healthy liver function is essential to life, cancerous tumours in the liver can cause serious illness and are often life-threatening.

For some patients, these tumours can be surgically removed. Unfortunately, sometimes because of the number and location of tumours in the liver, surgery is not a viable option for many patients.

For patients who are not candidates for surgery, doctors may recommend systemic drug therapy, focal therapy, or both. Each of these therapeutic approaches has their own benefits and limitations:

- Systemic Chemotherapy – Anti-cancer drugs are administered to the entire body (either orally or intravenously). In addition to attacking cancerous cells, the drugs will damage some healthy cells, causing significant side effects.
- Focal therapy – this family of techniques use heat, intense cold and other methods to destroy cancerous tissue directly. Focal techniques can be used on tumours doctors can see, but may miss micro-tumours that are often present in a diseased organ.

How is Chemosaturation therapy (CS-PHP) different from other treatments?

There are several important differences between Chemosaturation Therapy and other liver cancer treatments:

- With Chemosaturation Therapy, your doctor can give high dose drugs directly to your liver which may help destroy the cancer.
- By delivering this drug to potentially the entire liver, tumours both seen and unseen by your doctor can potentially be treated.
- Because Chemosaturation Therapy keeps most of the drug from spreading to the rest of your body, you may not have as many side effects.
- Because Chemosaturation Therapy does not involve major surgery, you may recover faster with Chemosaturation Therapy.

How is it done?

The concept of Chemosaturation Therapy is to temporarily isolate the liver from the body's blood circulation and deliver concentrated doses of an anti-cancer drug directly to the liver, "saturating" the entire organ. Blood leaving the liver is directed outside of the body to filters that remove most of the anti-cancer drug before returning it to the body. Because the liver is isolated from the rest of the body, the anti-cancer drug can be given at higher concentration levels than is possible in systemic chemotherapy. By delivering this drug to the entire liver, treatment is administered to potentially both visible tumours and undetected microtumours.

Meeting with Your Doctor

Your doctor will meet with you to explain how the procedure works. Your doctor will explain how CS-PHP therapy may help you and will also explain any side effects you might have. Your doctor will also talk to you about other choices for treatment. This is a good time to ask questions and to talk about any questions or concerns that you have.

Scans and Tests

In the weeks leading up to your procedure, your doctor will setup different tests: SCANS of your liver and other parts of your body will help your doctor be sure you are healthy enough for the procedure and will help your doctor get ready for your procedure. BLOOD TESTS will help your doctor be sure you are healthy enough to have the procedure.

The Day Before Your Procedure

The day before your procedure, you will go to the hospital. If you take any medicines, please bring them with you. You will go to your hospital room and get settled in for the night. Your nurse may give you medicines to help you get ready for the procedure. You will not be able to eat anything the night before your procedure.

The Day of Your Procedure

The next day you will go to the procedure room. Your doctor will give you general anaesthesia (medicine to help you fall asleep). You will not feel anything during the procedure. When you are asleep, your doctor will place catheters (small plastic tubes) in your legs and in your neck.

- One catheter will be used to put two small balloons around your liver to “seal off” the blood in your liver from the rest of your body.
- Another catheter will be used to give you chemotherapy during the procedure.

Your Procedure

CHEMOSAT has 3 steps:

- **ISOLATION:** Your doctor will put a catheter with 2 small balloons around your liver. The balloons will “seal off” the blood in your liver from the rest of your body.
- **SATURATION:** Next, your doctor will give you a powerful anti-cancer drug. The drug will go directly to your liver. The balloons will keep the drug from spreading to other parts of your body.
- **FILTRATION:** After the anti-cancer drug has been delivered to your liver, the CHEMOSAT filter will remove most of the drug from your blood. This is an important step because it can help reduce side effects after your procedure to a level that you can manage better.

After Your Procedure

The balloons around your liver and the catheters in your legs will be removed and you will be moved to a recovery room. Your doctor may leave the catheter in your neck after the procedure in case they need to give you more drugs.

Your doctor will be watching you closely after the procedure. You may feel tired and you may have an upset stomach but this should not last very long.

You will spend some time in the hospital while you recover from the procedure.

When you Get Home

Much is happening inside your body and we need to watch carefully to make sure you stay well. After your procedure, you will have:

- Blood tests every 2-3 days
- New drugs if you need them.
- Scans after 6 weeks to monitor your cancer.
- Be sure you don't miss these important appointments.

What are the risks associated with CS-PHP therapy?

Some potential risks include:

Less white blood cells in your blood

- You may get infections easily.

Less platelets in your blood

- You may get bruises easily.
- It may take longer to stop bleeding if you are injured.
- You may get a nose bleed or your gums may bleed.
- If you are a woman, your period may be heavy.

Less red cells in your blood

- You may feel tired.
- You may feel short of breath or dizzy.
- You may feel chest pain.
- You may have pale skin.
- Your hands and feet may feel cold.
- You may not think clearly.
- You may have a headache.

Less hemoglobin in your blood

- You may feel tired or weak.

Thinner Blood (High Pro-time or INR)

- It may take longer to stop bleeding if you are injured.

Low calcium in your blood

- You may feel confusion or you may have memory loss.
- You may feel depressed.
- You may feel tingling or have muscle aches.
- Your heart may beat differently.

Less albumin in your blood and increased liver function tests

Poor Liver Function

- Your skin and eyes may turn yellow.
- You may feel pain in the upper right part of your abdomen.
- You may feel sick to your stomach and may vomit.
- You may feel confused or sleepy.

Some people should not use CHEMOSAT.

- If you are pregnant you should avoid CHEMOSAT.
- If you are breast-feeding, you should not use CHEMOSAT.
- If you are elderly and have problems with your organs, you should use CHEMOSAT with caution.
- And CHEMOSAT has not been studied with children

Your doctor will be watching carefully for these side effects. You will have blood tests every few days to try and find any side-effects early. If you have any of these side effects, your doctor may give you additional drugs to improve your health.

Call your doctor right away if you have:

- fever or chills;
- a sore in your mouth;
- sore throat or cough (even a dry cough);
- burning feeling when you go to the bathroom;
- redness, swelling, or pain;
- bruises;
- any bleeding in your gums, mouth, or nose;
- diarrhoea;
- dark or bloody stool;
- pain in your chest or belly that was not there before.

You should also call your doctor if you feel tired, weak or sick. These are not all of the possible side effects of CHEMOSAT, so be sure to call your doctor if you notice anything different.

After your procedure, you will be in contact with your doctor and your care team often. Do not be afraid to let your doctor or nurse know if something does not feel right.

And finally, ask questions! If you are not sure about something, ask! We're here to help. Patients who ask questions can be sure they are getting the best possible care.

Consent

The hospital will give you a copy of the consent form. Please read this carefully. If you have any further questions, please ask a member of the treatment team on the day of your procedure before signing the consent form.

Who will perform the procedure?

CS-PHP therapy is performed by a **Consultant Interventional Radiologist** who has a particular expertise in guiding catheters using imaging. At Princess Grace Hospital or the Harley Street Clinic there are several Consultant Radiologists who perform this procedure and are part of the LION team offering an Interventional Oncology Service. The team works closely with other doctors involved in your care.

How long will the procedure take?

The procedure will take around 3.5 to 4 hours.

You should contact **your Consultant** if there is an emergency.

Contact Details:

In working hours (09:00-17:00) LION may be contacted via the medical secretaries:

Email: Lion@hcahealthcare.co.uk

or

Telephone: 0207 908 3756

or

Fax: 0207 908 3773

Out of working hours after 17:00 hrs Monday – Friday and at any time at the weekend you may contact the **LION Out of Hours Emergency Number:**

Telephone: 0207 754 5989

Correspondence Address

Leading Interventional Oncology Network (LION) Ltd
30 Devonshire Street
London
W1G 6PU

Space for notes and questions

Author: Dr Rowland Illing , Dr Julian Hague

Publication date: October 2014

Date last reviewed: October 2014

Date next review due: October 2015

Leaflet code: