Paroxysmal
Nocturnal
Haemoglobinuria
(PNH) Patient/Parent
information brochure
GLOSSARY OF TERMS

**Anaemia** - A condition in which the body does not have enough red blood cells; this may lead to fatigue and other symptoms.

**Anticoagulants** - Sometimes referred to as blood thinners, anticoagulants are drugs that decrease the clotting ability of blood and help prevent the formation of blood clots.

**Aplastic anaemia** - An immune disorder in which the bone marrow does not produce enough healthy blood cells, including red blood cells, white blood cells, and platelets. Patients with PNH sometimes also have aplastic anaemia.

**Blood clots** - When many platelets in the blood stick together, they form a blood clot. These clots can block blood flow in the veins and arteries, depending on their size and location (see “Thrombosis”).

**Bone marrow** - Soft tissue inside the large bones. Bone marrow contains stem cells, which have the capacity to go on to form red blood cells, white blood cells, and platelets in a process called haematopoiesis.

**Chronic haemolysis** - The destruction of red blood cells (haemolysis) over a long period of time (chronic).

**Complement** - Part of the immune system that destroys bacteria and other foreign cells. In PNH, complement is responsible for the destruction of red blood cells which lack specific protective proteins.

**Dysphagia** - Difficulty or discomfort when swallowing.

**Dyspnoea** - A sense of difficulty with breathing resulting in “shortness of breath.”

**Erythrocyte** - An alternative name for a mature red blood cell.

**Haemoglobin** - The brownish-red substance in red blood cells that carries oxygen throughout the body. Responsible for the characteristic dark urine seen in PNH.

**Haemoglobinuria** - Haemoglobin in the urine. This is technical term for the dark “cola-coloured” urine which is sometimes seen in PNH. When the red blood cells are “lysed” or destroyed, as they are in PNH, haemoglobin is released from the red blood cells. When it is not all processed by the body’s metabolism and kidneys, it is sent out as waste and colours the urine a characteristic cola-brown colour.

**Jaundice** - The yellow discolouration of the skin and mucous membranes (eg. eyes). Jaundice is caused by the build-up of a pigment called bilirubin, which is produced when the body breaks down red blood cells.

**LDH (Lactate Dehydrogenase)** - An enzyme (chemical messenger) which is increased in conditions where red blood cells destruction is increased (haemolysis).

**Meningococcal infection** - Infection caused by the bacterium Neisseria meningitidis (also named meningococcus). This infection can cause meningitis or overwhelming infection of the bloodstream (sepsis).

**Myelodysplastic syndromes (MDS)** - A group of blood disorders that all involve problems with the production of blood cells. Patients with PNH sometimes also have myelodysplastic syndromes.

**Paroxysmal Nocturnal Haemoglobinuria (PNH)** - A rare blood disorder in which red blood cells are chronically destroyed or haemolysed by the complement system. This can lead to severe anaemia, fatigue and thrombosis.

**PNH clone** - A “group” (or collection) of cells in the body which are affected by the genetic defect that causes PNH. These cells all come from the same parent cell in the bone marrow. Since the genetic defect lies in parent cell, all cells derived from the parent cell, including red blood cells, white blood cells and platelets, are affected. The number of cells affected by PNH determines how large or small the PNH clone is.

**Red blood cells (RBCs)** - Blood cells that carry oxygen using a protein complex called haemoglobin. PNH red blood cells are continually attacked and destroyed by the complement system because they are missing important protective proteins.

**Stem cells** - Cells produced in the bone marrow that can become red blood cells, white blood cells or platelets. PNH is a disease that originates in the stem cells.

**Thrombosis (thrombotic events)** - The formation or development of a blood clot that often blocks blood from flowing through a vessel. In PNH, blood clots can occur in common places but can also occur in unusual sites, such as in vessels in the abdomen (see Blood clots).
INTRODUCTION

This guide is for adult and adolescent patients suffering from Paroxysmal Nocturnal Haemoglobinuria (PNH) and for parents of children and adolescents with PNH. The guide will provide you with information about the medicine SOLIRIS®, the way in which it will be prescribed and given to you, and important safety information of which you should be made aware.

Please consult your doctor if you have any questions relating to PNH or SOLIRIS therapy.

Please refer to the Soliris Package Leaflet before use and for further information during treatment.

WHAT IS SOLIRIS®?

SOLIRIS is a medication that is used to treat patients with PNH. It is a type of “humanised monoclonal antibody”; that is to say a protein which targets specific chemical messengers in the body to ensure that the body’s chemical regulators are kept in check.

“Humanised” means that they have been developed to behave as the body’s natural proteins would do. The “clone” (or cluster) is a single type of protein and, ordinarily, antibodies fight infection: sometimes they simply regulate chemical systems in the body.

PNH is a disease where a specific part of the natural immune system, called the complement system, is overactive, usually due to a genetic defect in the normal regulation of the complement system. The complement system is always switched on and when it is overactive it can destroy red blood cells in the body (haemolysis) which can lead to low blood counts, tiredness, difficulty in functioning, pain, dark-coloured urine, shortness of breath and blood clots.

SOLIRIS is an antibody which binds to one of the parts of the complement system and makes it inactive. Therefore SOLIRIS reduces the haemolysis (destruction of red blood cells*) which is the cause of the signs and symptoms of PNH.¹

As PNH is a chronic disease, SOLIRIS is intended as a long-term treatment.

FAQs

What are the safety considerations related to SOLIRIS?

IMPORTANT SAFETY INFORMATION¹

SOLIRIS blocks a part of your immune system. It therefore increases the risk of severe infection and sepsis, especially by a type of bacteria called Neisseria meningitidis. This can cause meningitis which is a major brain inflammation or a severe infection of the blood (septicaemia).

MENINGOCOCCAL INFECTION REQUIRES URGENT AND APPROPRIATE CARE AS IT MAY BECOME RAPIDLY FATAL OR LIFE-THREATENING OR LEAD TO MAJOR DISABILITIES

It is important to understand what precautions to take to reduce the risk of these infections and what to do if you are worried that you may have an infection (see page 4).
**As a safety precaution:**

You must be vaccinated against meningococcal infection before starting SOLIRIS.

Your doctor or nurse will make sure you receive this vaccine at least 2 weeks before your first infusion.

If no vaccine is available for your young child or if the vaccine should not be administered for medical reasons (“contraindicated”), you or your child will be given an antibiotic throughout the treatment period.

Children and adolescents less than 18 years of age will be vaccinated against *Haemophilus influenza* and pneumococcal infections according to national vaccination guidelines at least 2 weeks prior to initiation of SOLIRIS therapy and following the national vaccination recommendations for each age group.

**What are the symptoms that should alert me to the potential of infection?**

Vaccination reduces the risk of developing an infection, but it does not eliminate the risk completely. You will need to be aware of the signs and symptoms of infection and notify your doctor immediately if ANY of the following symptoms occur:

- Headache with nausea or vomiting
- Headache with a stiff neck or back
- Fever
- Rash
- Confusion
- Severe muscle ache combined with flu-like symptoms
- Sensitivity to light

If you cannot reach your doctor, go to an Accident & Emergency department and show them your Patient Safety Card.

**Are there steps I should take before starting therapy?**

Prior to commencing treatment, your doctor will discuss with you the importance of:

- Receiving a vaccine against meningitis
- Understanding the symptoms associated with infections and what to do if you experience those symptoms
- Understanding (in the event your child is being treated) that your child should be vaccinated against *Haemophilus influenza* and pneumococcal infections according to national vaccination guidelines at least 2 weeks prior to initiation of SOLIRIS therapy
- Being carefully monitored by your doctor following any discontinuation of SOLIRIS treatment

Your doctor or nurse will make sure you receive a vaccine against meningococcal infection at least 2 weeks before your first infusion.

In addition, you will be closely monitored for meningococcal and other infections during the course of your treatment.
How do I get started on SOLIRIS therapy?

SOLIRIS must be prescribed by a doctor.
You will also be given a starter’s kit containing:

- **Patient Safety Card**: it is very important to rapidly identify and treat certain types of infection in patients who receive SOLIRIS; therefore you will be given a Safety Card which lists specific symptoms which you should always look out for. You should carry this card at all times and show it to any healthcare professional you see.

- **PNH Patient/Parent information brochure**

- Your doctor will offer you/your child the opportunity/invite you to participate in the PNH Registry. It is your doctor who can register you/your child in this registry.

How is SOLIRIS administered?¹

SOLIRIS is administered through an intravenous infusion (introduction of a solution into a vein). The infusion lasts **25 to 45 minutes**. It must be prepared and administered by a doctor or other suitably qualified healthcare professional.

As with all drugs administered through an intravenous infusion, SOLIRIS may cause an immediate or delayed reaction. Please refer to your doctor if that happens.

Because there is a risk of infusion reaction (including allergic reaction), following each infusion you will be monitored for about one hour. Your doctor’s instructions should be carefully observed.

What dose of SOLIRIS is used?¹

**Initial Phase:**

Every week for the first four weeks, your doctor will administer an intravenous infusion of diluted SOLIRIS. Each infusion will consist of a dose of 600 mg (2 vials of 30 ml) and will take 25-45 minutes.

**Maintenance Phase:**

In the fifth week, your doctor will administer an intravenous infusion of diluted SOLIRIS at a dose of 900 mg (3 vials of 30 ml) over a 25-45 minute period.

After the fifth week, your doctor will administer 900 mg (3 vials of 30 ml) every two weeks as a long-term treatment.
Children and adolescent with PNH who are 40 kg weight and over are treated with the adult dosing recommendations.

Children and adolescents with PNH who are under 40 kg weight require a smaller dose based on how much they weigh. Your doctor will calculate this.

It is very important to make sure that you do not miss or postpone any scheduled treatment appointment in order to continue to control haemolysis and experience the full benefits of SOLIRIS therapy.

**How long will I need to take SOLIRIS?**

Since PNH is a chronic disease, SOLIRIS is intended to be an ongoing therapy.

Patients who start SOLIRIS should continue receiving SOLIRIS, even if they feel better.

Interrupting or ending treatment with SOLIRIS may cause your PNH symptoms to come back more severely soon after stopping SOLIRIS treatment.

If you plan to stop treatment with SOLIRIS, you need to discuss beforehand with your doctor the possible side effects and risks, which include an increase in the destruction of your red blood cells (haemolysis) that may cause:

- A significant fall in your red blood cell count (anaemia)
- You to become confused or less alert
- Chest pain or angina
- Problems with your kidneys (increase in your serum creatinine level)
- Blood clotting (thrombosis)

You must not stop your treatment without medical surveillance.
Are there other considerations while I am on SOLIRIS?¹

Infection risk
Due to its mechanism of action, SOLIRIS should be administered with caution to patients with active systemic infections.

Allergic reactions
SOLIRIS contains a protein and proteins can cause allergic reactions in some people.

Other medication
It is important to understand that some medications you are taking, especially anticoagulants (blood thinners), such as aspirin or warfarin, should not be changed without consulting your doctor. Please make sure your doctor knows all medications you are taking.

Pregnancy
SOLIRIS is not recommended during pregnancy. Tell your doctor before starting treatment with SOLIRIS if you are pregnant or plan to become pregnant.

Breast-feeding
SOLIRIS may pass through your breast milk to your baby. Therefore you should not breast-feed during SOLIRIS treatment.

Older population
There are no special precautions for treated patients aged from 65 years and over.

Undesirable Effects
SOLIRIS is generally well-tolerated. The most commonly reported side effects was headache and the most serious side effect is meningococcal infection. Most headaches were mild and did not persist after the initial administration phase of SOLIRIS.
References

1. SOLIRIS® (eculizumab) Package Leaflet.