

PCSK9 Inhibitors are the latest class of medicines approved for, and accepted for use in NHS Scotland, for the management of hypercholesterolemia.<sup>1,2</sup>

#### **Background**

LDL-cholesterol is cleared from the plasma by binding to LDL receptors on the surface of hepatocytes. This receptor/particle is then taken into the hepatocyte where the receptor is degraded by PCSK9.

Inhibition of PCSK9 allows the receptor to be recycled back to the cell membrane making more receptor available for clearance of LDL.

Compared to placebo, PCSK9 inhibitors have been shown to reduce plasma LDL by approximately 60%.<sup>3,4</sup>

#### **Place in therapy**

Two PCSK9 inhibitors are on the NHS GGC formulary; alirocumab (Praluent<sup>®</sup>) and evolocumab (Repatha<sup>®</sup>). Both are accepted for use with or without a statin and/or ezetimibe in adult patients with familial hypercholesterolaemia with uncontrolled lipid levels as per the [NHSGGC guideline](#).

#### **Dosing**

The dose of alirocumab is 75mg every two weeks by subcutaneous injection which can be increased to 150mg every two weeks depending on response.<sup>3</sup>

The dose of evolocumab is 140mg every two weeks by subcutaneous injection.<sup>4</sup>

#### **Monitoring**

LDL-C plasma concentrations should be rechecked 4 weeks after commencement of therapy and after any dose changes. This will be done by specialists.

#### **Role of Primary Care**

Treatment will be commenced on the advice of a Lipid Specialist only. As with other recommendations originating from an outpatient clinic, the specialist will write to the patient's GP requesting that treatment is started and prescriptions issued. All treatment monitoring and adjustments will be undertaken by the clinic.

#### **Patient support**

Both companies producing PCSK9 inhibitors provide a patient support programme. Once commenced on one of these medicines, the Lipid Specialist who recommends this treatment will inform the support nurse that treatment is to commence. The support nurse will contact the patient prior to treatment starting and arrange to visit the patient at home to demonstrate how to self-inject. Each patient is eligible for ongoing support for 1 year.

#### **Sharps Disposal**

Lipid clinics will be responsible for supplying, and subsequent disposal of sharps bins. Patients will be instructed to return sharps to the clinic at each appointment.

#### References

<sup>1</sup> Scottish Medicines Consortium. Detailed Advice Document. Alirocumab solution for injection (Praluent®). SMC 1147/16. Published 08/07/16. Accessed via [www.scottishmedicines.org.uk](http://www.scottishmedicines.org.uk) on 20/06/17.

<sup>2</sup> Scottish Medicines Consortium. Detailed Advice Document. Evolocumab solution for injection (Repath®). SCC 1148/16. Published 13/01/17. Accessed via [www.scottishmedicines.org.uk](http://www.scottishmedicines.org.uk) on 20/06/17.

<sup>3</sup> Sanofi. Summary of Product Characteristics. Praluent solution for injection in pre-filled pen. Last Updated 09/12/16. Accessed via [www.medicines.org.uk](http://www.medicines.org.uk) on 20/06/17.

<sup>4</sup> Amgen Ltd. Summary of Product Characteristics. Repatha SureClick. Last updated 24/02/17. Accessed via [www.medicines.org.uk](http://www.medicines.org.uk) on 20/06/17.