1

This promotional meeting is organised and funded by Sanofi.
Prescribing information can be requested at this meeting and is available at the end of this presentation.

Practical guidance on helping your patients reach goal

Dr. Mohamed Elnaggar MD, PhD, MRCP Endo

Consultant Endocrinologist

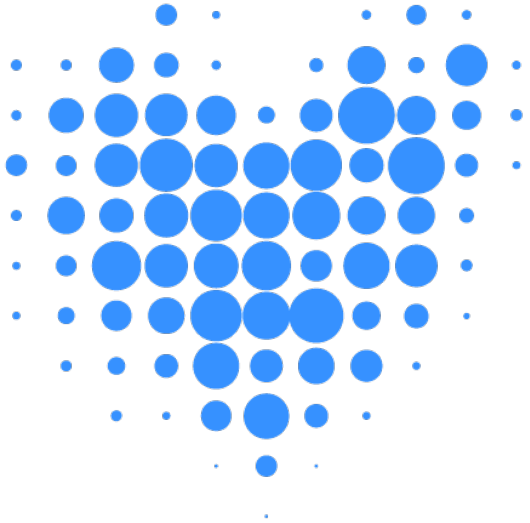
Clinical Lipid Lead South Cumbria and Lancashire

Disclosures

Received lecture, advisory board and/or consulting fees from Pharmaceutical companies including:

- Abbott
- Amarin
- Amgen
- AstraZeneca
- Boehringer-Ingelheim
- Daiichi-Sankyo
- Lilly
- Menarini
- Novartis
- Novo Nordisk
- Sanofi

Agenda



1 Context and Intro

2 Challenges

3 Vision

4 Clinical pathways & solutions

5 Key success factors for implementation

Context - Intro

- In the UK it is currently estimated that 7.6 million people are living with cardiovascular disease. Furthermore, cardiovascular disease (CVD) cause around a quarter of all deaths in the UK; that's more than 160,000 deaths each year, or 460 each day – that's one death every three minutes (1).

- There is now consistent evidence from numerous genetic studies and clinical studies that unequivocally establishes that LDL cholesterol (LDL-C) is causative of ASCVD. LDL-C lowering trials with statins alone and in combination with ezetimibe and proprotein convertase subtilisin kexin type 9 (PCSK9) inhibitors have shown dose-dependent reduction in the risk of major cardiovascular events that is proportional to the absolute magnitude of the reduction in LDL-C (2).

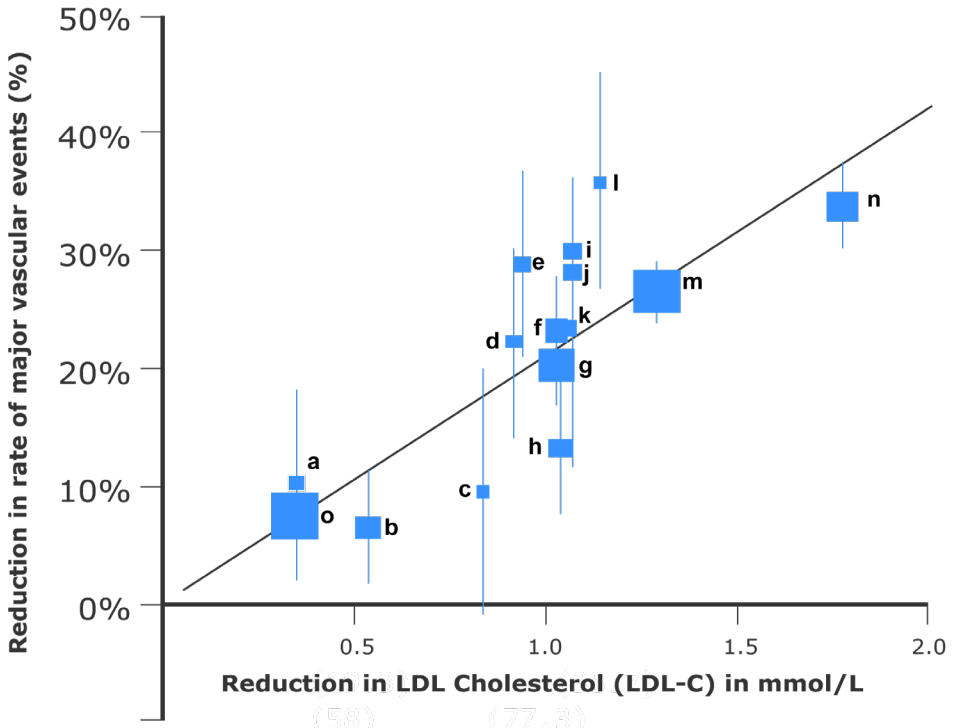
1.https://www.bhf.org.uk/-/media/files/for-professionals/research/heart-statistics/bhf-cvd-statistics-uk-factsheet.pdf?rev=c7ad10c134bd46a4aae483cc8d4b7c16&hash=51068640774D775C4F1DFD525B5F9EBA accessed June 2024

2.Ference BA, et al. Low-density lipoproteins cause atherosclerotic cardiovascular disease. 1. Evidence from genetic, epidemiologic, and clinical studies. A consensus statement from the European Atherosclerosis Society Consensus Panel. Eur Heart J 2017; 38: 2459–2472.

Context - Intro

CTT Meta-Analysis – A linear relationship with reduction in major cardiovascular events

Effect of Statins & Non-Statin On Reducing LDL-C & Major Vascular Events



a:GISSI Prevenzione
b: ALLHAT-LLT
c: ALERT
d: LIPS
e: AFCAPS/TexCAPS
f: CARE
g: LIPID
h: PROSPER
i: ASCOT-LLA
J: WOSCOPS
k: Post-CABG
l: CARDS
m: HPS
n: 4S
O: IMPROVE-IT

*Image adapted from Cannon et al 2015[1]

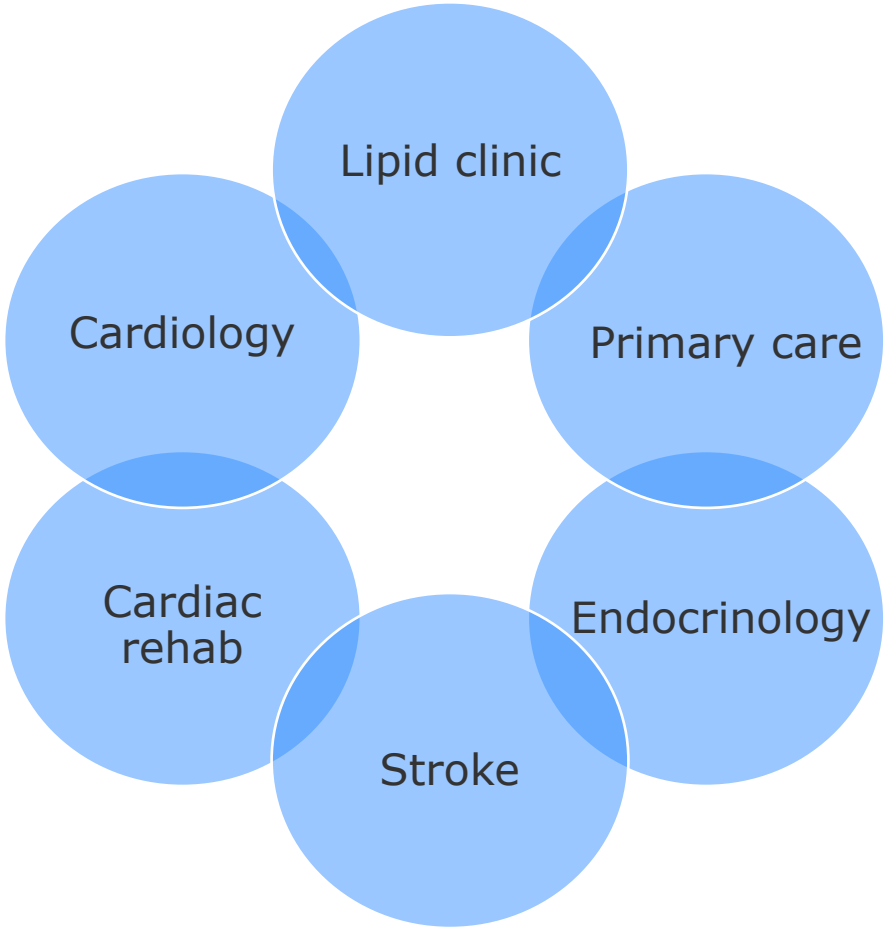
1. Cannon CP et al. NEJM 2015; 372:2387-2397.

Challenges?

- Identification of patients
- Lack of clear referral pathways
- Guidelines unclear/ not easy to follow
- Targets?
- No time to see pts?
- No RED Exclamation marks

Vision - Leadership

Multiple parties are responsible for the management of ASCVD patients, yet ownership belongs to?



Lipid specialists are the most suited to take ownership of improving…LIPIDS!

- Education regarding targets
- Knowledge on new medications
- Simplifying Guidelines
- Establishing referral pathways
- Enabling Primary Care

sanofi

ASCVD-Atherosclerotic Cardiovascular Disease

Information provided by speaker

Lab Requesting

CVD PRIMARY PREVENTION LIPID PROFILE

	Flag if greater than	AUTOCOMMENT
Total Cholesterol	7.5*	This patient meets the numerical criteria for Familial Hypercholesterolaemia. Refer to lipid clinic if secondary causes of hyperlipidaemia have been excluded, lipids have been constantly elevated according to FH criteria and a positive family history of ASCVD is confirmed (NICE CG71, updated 2019).
HDL Cholesterol	No flag	
Non-HDL Cholesterol	No flag	
LDL Cholesterol	4.9*	This patient meets the numerical criteria for Familial Hypercholesterolaemia. Refer to lipid clinic if secondary causes of hyperlipidaemia have been excluded, lipids have been constantly elevated according to FH criteria and a positive family history of ASCVD is confirmed (NICE CG71, updated 2019).
Triglycerides	4.5* 1. 10 to 20 2. 20	1. Repeat the TG measurement with a fasting test (after an interval of 5 days, but within 2 weeks) and review for potential secondary causes of hyperlipidaemia. Seek specialist advice if the TG concentration remains > 10mmol/litre. At risk of acute pancreatitis. 2. Refer to lipid clinic for urgent specialist review if not a result of excess alcohol or poor glycaemic control. At risk of acute pancreatitis.
*	No abnormal result or flag	Please calculate QRISK score to assess CV risk as per NICE guidance NG238 December 2023

Guidelines at *University Hospitals of Morecambe Bay NHS Foundation Trust accessed June 2024*

Lab Requesting

CVD SECONDARY PREVENTION LIPID PROFILE

	Flag if greater than	AUTOCOMMENT
Total Cholesterol	7.5	This patient meets the numerical criteria for Familial Hypercholesterolaemia. Refer to lipid clinic if secondary causes of hyperlipidaemia have been excluded and lipids have been constantly elevated according to FH criteria (NICE CG71, updated 2019).
HDL Cholesterol	No flag	
Non-HDL Cholesterol	2.5	This patient is not meeting national secondary prevention targets and remains at high risk of ASCVD. Please consider escalating lipid lowering therapy or seek advice from Lipid Clinic.
LDL Cholesterol	2.0	This patient is not meeting national secondary prevention targets and remains at high risk of ASCVD. Please consider escalating lipid lowering therapy or seek advice from Lipid Clinic.
Triglycerides	1. 10 to 20 2. 20	**1.** Repeat the TG measurement with a fasting test (after an interval of 5 days, but within 2 weeks) and review for potential secondary causes of hyperlipidaemia. Seek specialist advice if the TG concentration remains > 10mmol/litre. At risk of acute pancreatitis **2.** Refer to lipid clinic for urgent specialist review if not a result of excess alcohol or poor glycaemic control. At risk of acute pancreatitis.

Guidelines at *University Hospitals of Morecambe Bay NHS Foundation Trust accessed June 2024*

Journey to Goal - UHMBT

- The lipid lowering therapy treatment pathway is increasing in complexity, with a choice of multiple therapies all with differing mechanisms, duration of action and efficacy, and different national reimbursement thresholds and patient restrictions.

- Given the weight of evidence behind “lower is better” targets for LDL-C (1) it is becoming increasingly important for clinicians to plan the patient’s lipid treatment journey and to move away from a “fire and forget” approach.

Ference BA, et al.. Eur Heart J 2017; 38: 2459–2472. Low-density lipoproteins cause atherosclerotic cardiovascular disease. 1. Evidence from genetic, epidemiologic, and clinical studies. A consensus statement from the European Atherosclerosis Society Consensus Panel

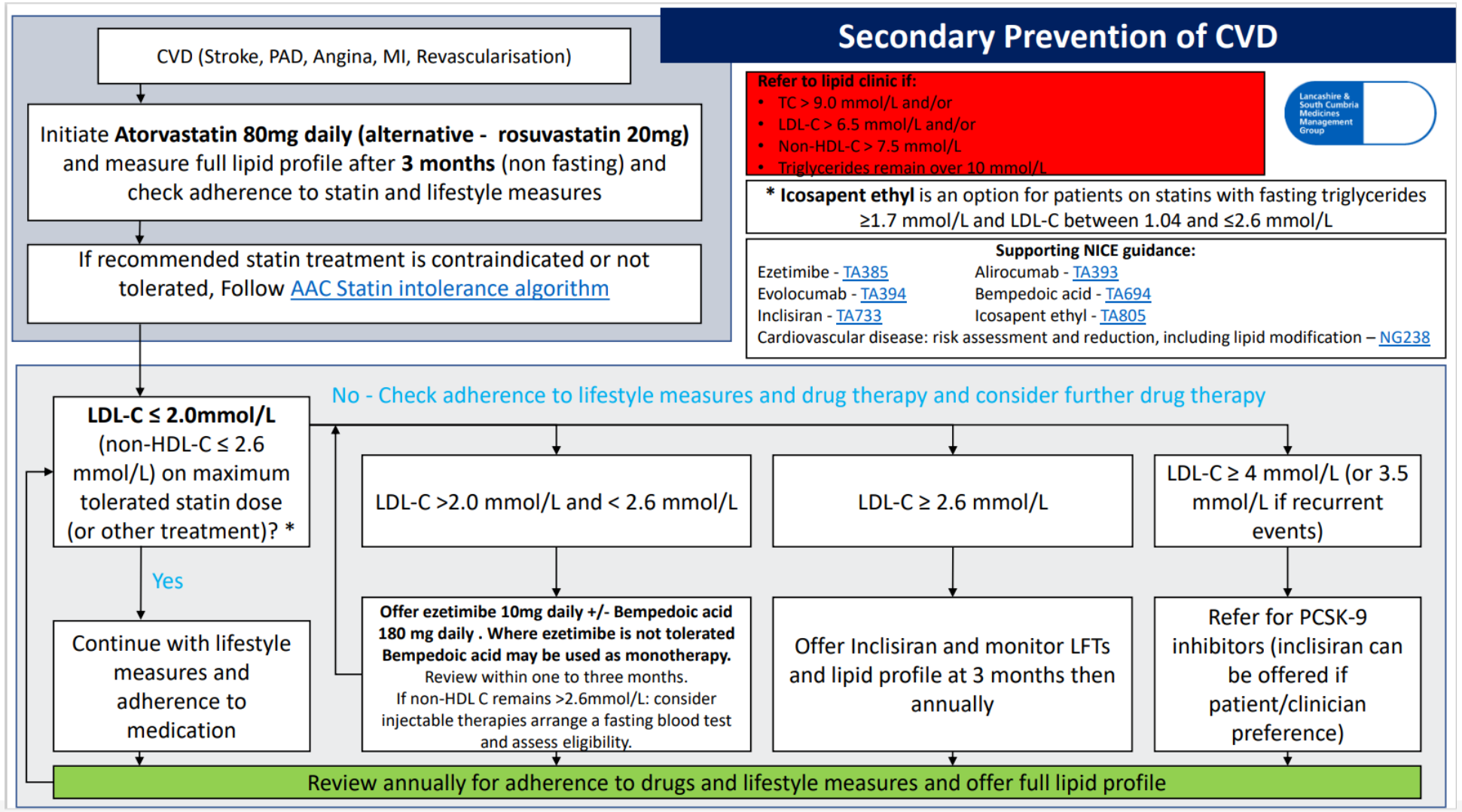
Journey to Goal – UHMBT

- While NICE NG238 advocates a traditional stepwise pathway of statin then ezetimibe followed by injectables (based on cost and not clinical effectiveness), we believe that prescribing of ezetimibe second line may preclude 3rd line injectable prescribing and lead to "ezetimibe limbo" where the patient is now below the reimbursement threshold for injectable prescribing but still not achieving their LDL-C target.

- Calculation of distance to goal upfront prior to the addition of any lipid lowering therapy will give an indication of whether the patient is likely to get to target on statin monotherapy or will require combination therapy to get to target. Once the distance to goal is calculated the clinician should then think about the journey to goal.

NICE. NG238. Cardiovascular disease: risk assessment and reduction, including lipid modification. Available at Overview | Cardiovascular disease: risk assessment and reduction, including lipid modification | Guidance | NICE Accessed July 2024
UHMBT at *University Hospitals of Morecambe Bay NHS Foundation Trust*

Guidelines – Lancashire & SC MMG



Lipid Management Pathway for Secondary Prevention of Cardiovascular Disease (CVD) V1.1 (lancsmmg.nhs.uk) accessed June 2024

Lancashire SCMMG-Lancashire and South Cumbria Medicines Management Group

Efficiency with Time

- Triage referrals based on a clear referral criteria handed over to primary care

Conditions Treated

Hyperlipidaemia
Familial Lipid disorders
Complications of lipid-regulating drugs including multiple statin intolerances
2 or more cholesterol results that are consistent with Simon-Broome criteria (T chol >7.5 and/or LDL >5)
Provided that: Patient did not have previously lower results off treatment and/or Isolated Hypercholesterolaemia (if TG are elevated, this is not FH)

Exclusions

This service is not suitable for patients with;
Excess Alcohol
Uncontrolled Diabetes
Hypothyroidism
Liver Disease
Nephrotic Syndrome

Suspected familial hypercholesterolaemia (FH);
Cholesterol > 7.5mmol/L when age under 30
OR Family history of coronary heart disease before age 60 AND cholesterol > 7.5mmol/L OR LDL-cholesterol > 4.8mmol/L
OR
1st degree relative with known gene mutation causing FH

Hypertriglyceridemia (not due to excess alcohol or uncontrolled diabetes);
Triglyceride > 20 mmol/L
OR
Triglyceride 10-20 mmol/L which persists on a fasting lipid profile
OR
Triglyceride 4.5 – 9.9 mmol/L WITH non HDL cholesterol > 7.5mmol/L

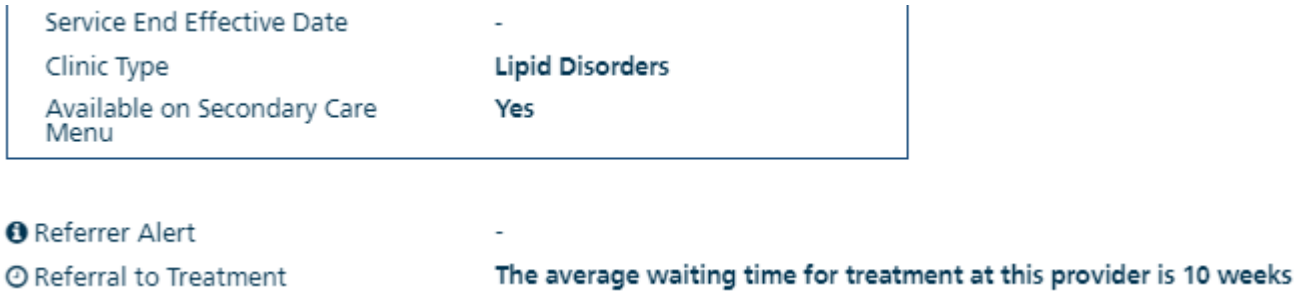
Statin intolerance;
intolerance to 3 or more statins (MUST have tried Rosuvastatin).

Injectable therapy – Secondary prevention PH
Not meeting LDL targets on maximal tolerable doses of oral medications.

Guidelines at *University Hospitals of Morecambe Bay NHS Foundation Trust accessed June 2024*

Efficiency with Time

- Virtual results clinic…



Service End Effective Date	-
Clinic Type	**Lipid Disorders**
Available on Secondary Care Menu	**Yes**

Referrer Alert	-
Referral to Treatment	**The average waiting time for treatment at this provider is 10 weeks**

Guidelines at *University Hospitals of Morecambe Bay NHS Foundation Trust accessed June 2024*

We would like to hear your feedback

Scan this code to give us your feedback about this Sanofi sponsored symposium

SCAN ME

Prescribing Information: Praluent® (alirocumab) solution for injection in pre filled pen

Presentations: Praluent 75mg or 150mg solution for injection in a pre-filled pen, contains 75mg alirocumab in 1ml solution or 150mg alirocumab in 1ml solution, respectively. Praluent 300mg solution for injection in a pre-filled pen, contains 300mg alirocumab in 2ml solution.

Indications: Praluent is indicated in adults with primary hypercholesterolaemia (heterozygous familial and non-familial) or mixed dyslipidaemia, as an adjunct to diet: in combination with a statin or statin with other lipid lowering therapies in patients unable to reach LDL-C goals with the maximum tolerated dose of a statin or, alone or in combination with other lipid-lowering therapies in patients who are statin-intolerant, or for whom a statin is contraindicated. Praluent is indicated in adults with established atherosclerotic cardiovascular disease to reduce cardiovascular risk by lowering LDL-C levels, as an adjunct to correction of other risk factors: in combination with the maximum tolerated dose of a statin with or without other lipid-lowering therapies or, alone or in combination with other lipid-lowering therapies in patients who are statin-intolerant, or for whom a statin is contraindicated.

Dosage and Administration: Secondary causes of hyperlipidaemia or mixed dyslipidaemia (e.g. nephrotic syndrome, hypothyroidism) should be excluded prior to initiation of alirocumab. The usual starting dose is 75mg, once every 2 weeks. Patients requiring larger LDL-C reduction (>60%) may be started on 150mg once every 2 weeks or 300mg once every 4 weeks (monthly). A dose of 300mg can be given either as one 300mg injection or as two 150mg injections consecutively at two different injection sites. If a dose is missed, the dose should be administered as soon as possible and thereafter, dosing should be resumed on the original schedule. Lipid levels can be assessed 4 - 8 weeks after treatment initiation or titration, and dose adjusted accordingly (up-titration or down-titration). If additional LDL-C reduction is needed in patients treated with 75mg once every 2 weeks or 300mg once every 4 weeks (monthly), the dosage may be adjusted to the maximum dosage of 150mg once every 2 weeks. For dosing schedule and method of administration in children >8 years, please consult the SmPC. Praluent should be given by a caregiver in children less than 12 years of age and for adolescents 12 years and older, Praluent should be administered by or under adult supervision.
Method of administration: Praluent is injected as a subcutaneous injection into the thigh, abdomen or upper arm. It is recommended to rotate the injection site with each injection. Alirocumab should not be injected into areas of active skin disease or injury such as sunburns, skin rashes, inflammation, or skin infections. Alirocumab must not be co-administered with other injectable medicinal products at the same injection site. The patient may either self-inject Praluent, or a caregiver may administer Praluent, after guidance has been provided by a healthcare professional on proper subcutaneous injection technique. The solution should be allowed to warm to room temperature for 30 - 40 minutes prior to use.

Special populations: Elderly and body weight impact: No dose adjustment needed. Hepatic impairment: No dose adjustment is needed for patients with mild or moderate hepatic impairment. Alirocumab should be used with caution in patients with severe hepatic impairment (Child-Pugh C). Renal impairment: No dose adjustment is needed for patients with mild or moderate renal impairment. Alirocumab should be used with caution in patients with severe renal impairment. Paediatric population: The safety and efficacy of Praluent in children less than 8 years of age have not been established.

Contraindications: Hypersensitivity to the active substance or to any of the excipients.
Precautions and Warnings: Allergic reactions: General allergic reactions, including pruritus, as well as rare and sometimes serious allergic reactions such as hypersensitivity, nummular eczema, urticaria, and hypersensitivity vasculitis have been reported in clinical studies. Angioedema has been reported. If signs or symptoms of serious allergic reactions occur, treatment with alirocumab must be discontinued and appropriate symptomatic treatment initiated.
Interactions: Since alirocumab is a biological medicinal product, no pharmacokinetic effects of alirocumab on other medicinal products and no effect on cytochrome P450 enzymes are anticipated. Statins and other lipid lowering therapies can increase clearance of Praluent; however, LDL-C reduction was maintained on two weekly alirocumab administrations.
Fertility, Pregnancy and Breast-feeding: There are no data from the use of Praluent in pregnant women. Alirocumab is an IgG1 antibody and is expected to cross the placental barrier. Thus use of Praluent is not recommended during pregnancy unless the clinical condition of the patient warrants it. Praluent is not recommended in breastfeeding women when colostrum is produced; for the rest of the breast-feeding period, a decision should be made whether to discontinue nursing or to discontinue Praluent. There are no data on adverse effects on fertility in humans.
Adverse Reactions: Common: local injection site reactions (including erythema/redness, itching, swelling, pain/ tenderness), upper respiratory tract signs and symptoms (oropharyngeal pain, rhinorrhoea, sneezing), and pruritus. Rare: Hypersensitivity, hypersensitivity vasculitis, urticaria and eczema nummular. Not known: Flu-like illness, angioedema. *Prescribers should consult the SmPC in relation to other adverse reactions.*
Legal Category: POM
List price: 1 x 75mg or 150mg pre-filled pen: £168. 2 x 75mg or 150mg: £336. 1 x 300mg pre-filled pen: £336.
Marketing Authorisation Numbers: 75mg: PLGB 04425/0835; 150mg: PLGB 04425/0834; 300mg: PLGB 04425/0884
Marketing Authorisation Holder: Sanofi, 410 Thames Valley Park Drive, Reading, Berkshire, RG6 1PT, UK.
For more information please contact: Medical Information, Sanofi, 410 Thames Valley Park Drive, Reading, Berkshire, RG6 1PT, UK. uk-medicalinformation@sanofi.com
Date of Preparation: February 2024.

Adverse events should be reported. Reporting forms and information can be found at www.mhra.gov.uk/yellowcard or search for MHRA Yellow Card in the Google Play or Apple App Store.
Adverse events should also be reported to the Sanofi drug safety department on Tel: 0800 0902314.
Alternatively, send via email to UK-drugsafety@sanofi.com