PRALUENT® (alirocumab) injection, for subcutaneous use

Initial U.S. Approval: 2015

## DOSAGE FORMS AND STRENGTHS

- Injection: 75 mg/mL or 150 mg/mL solution in a single-dose pre-filled pen (3)
- Injection: 75 mg/mL or 150 mg/mL solution in a single-dose pre-filled syringe (3)

## CONTRAINDICATIONS

History of a serious hypersensitivity reaction to PRALUENT. (4)

## WARNINGS AND PRECAUTIONS

**Adverse Reactions:** Hypersensitivity reactions (e.g., pruritus, rash, urticaria), including some serious events (e.g., hypersensitivity vasculitis, angioedema, and hypersensitivity reactions requiring hospitalization), have been reported with PRALUENT treatment. If symptoms resolve. (5.1)

**To report SUSPECTED ADVERSE REACTIONS,** contact Sanofi at 1-800-633-1610 or FDA at 1-800-FDA-1088 or www.fda.gov/medwatch.

See 17 for **PATIENT COUNSELING INFORMATION** and FDA-approved patient labeling

Revised: 03/2020

The recommended dose of PRALUENT in patients with HeFH undergoing LDL apheresis is 150 mg once every 2 weeks. PRALUENT can be administered without regard to timing of apheresis. (2.1)

**DOSE FORMS AND STRENGTHS**

- Injection: 75 mg/mL or 150 mg/mL solution in a single-dose pre-filled pen (3)
- Injection: 75 mg/mL or 150 mg/mL solution in a single-dose pre-filled syringe (3)

## DOSAGE AND ADMINISTRATION

The recommended starting dose of PRALUENT is 75 mg once every 2 weeks administered subcutaneously, since the majority of patients achieve sufficient LDL-C reduction with this dosage. An alternative starting dosage for patients who prefer less frequent dosing is 300 mg once every 4 weeks (monthly). (2.1)

If the LDL-C response is inadequate, the dosage may be adjusted to the maximum dosage of 150 mg administered every 2 weeks. (2.1)

The most commonly occurring adverse reactions (≥5% of patients treated with PRALUENT and occurring more frequently than with placebo) are nasopharyngitis, injection site reactions, and influenza. (6.1)

## INDICATIONS AND USAGE

1. **Prevention of Cardiovascular Events**
   - **PRALUENT** is indicated to reduce the risk of myocardial infarction, stroke, and unstable angina requiring hospitalization in adults with established cardiovascular disease. (1.1)

2. **Primary Hyperlipidemia** (including heterozygous familial hypercholesterolemia)
   - **PRALUENT** is indicated as an adjunct to diet, alone or in combination with other lipid-lowering therapies (e.g., statins, ezetimibe), for the treatment of adults with primary hyperlipidemia (including heterozygous familial hypercholesterolemia) to reduce low-density lipoprotein cholesterol (LDL-C). (1.2)

## CONTRAINDICATIONS

- Hypersensitivity reactions (e.g., pruritus, rash, urticaria), including some serious events (e.g., hypersensitivity vasculitis, angioedema, and hypersensitivity reactions requiring hospitalization), have been reported with PRALUENT treatment. (4)

## WARNINGS AND PRECAUTIONS

**Adverse Reactions:** Hypersensitivity reactions (e.g., pruritus, rash, urticaria), including some serious events (e.g., hypersensitivity vasculitis, angioedema, and hypersensitivity reactions requiring hospitalization), have been reported with PRALUENT treatment. (5.1)

**To report SUSPECTED ADVERSE REACTIONS,** contact Sanofi at 1-800-633-1610 or FDA at 1-800-FDA-1088 or www.fda.gov/medwatch.

See 17 for **PATIENT COUNSELING INFORMATION** and FDA-approved patient labeling

Revised: 03/2020

The recommended dose of PRALUENT in patients with HeFH undergoing LDL apheresis is 150 mg once every 2 weeks. PRALUENT can be administered without regard to timing of apheresis. (2.1)

**DOSE FORMS AND STRENGTHS**

- Injection: 75 mg/mL or 150 mg/mL solution in a single-dose pre-filled pen (3)
- Injection: 75 mg/mL or 150 mg/mL solution in a single-dose pre-filled syringe (3)

## CONTRAINDICATIONS

History of a serious hypersensitivity reaction to PRALUENT. (4)

## WARNINGS AND PRECAUTIONS

**Adverse Reactions:** Hypersensitivity reactions (e.g., pruritus, rash, urticaria), including some serious events (e.g., hypersensitivity vasculitis, angioedema, and hypersensitivity reactions requiring hospitalization), have been reported with PRALUENT treatment. (5.1)

**To report SUSPECTED ADVERSE REACTIONS,** contact Sanofi at 1-800-633-1610 or FDA at 1-800-FDA-1088 or www.fda.gov/medwatch.

See 17 for **PATIENT COUNSELING INFORMATION** and FDA-approved patient labeling

Revised: 03/2020

The recommended dose of PRALUENT in patients with HeFH undergoing LDL apheresis is 150 mg once every 2 weeks. PRALUENT can be administered without regard to timing of apheresis. (2.1)
Follow aseptic injection technique every time PRALUENT is administered.

Administer PRALUENT by subcutaneous injection into the thigh, abdomen, or upper arm using a single-dose pre-filled pen or single-dose pre-filled syringe.

Rotate the injection site with each injection.

To administer the 300 mg dose, give two 150 mg PRALUENT injections consecutively at two different injection sites.

Do not inject PRALUENT into areas of active skin disease or injury such as sunburns, skin rashes, inflammation, or skin infections.

Do NOT co-administer PRALUENT with other injectable drugs at the same injection site.

3 DOSAGE FORMS AND STRENGTHS

PRALUENT is a clear, colorless to pale yellow solution available as follows:

Injection: Single-dose pre-filled pen

• 75 mg/mL

• 150 mg/mL

Injection: Single-dose pre-filled syringe

• 75 mg/mL

4 CONTRAINDICATIONS

PRALUENT is contraindicated in patients with a history of a serious hypersensitivity reaction to PRALUENT. Reactions have included hypersensitivity vasculitis and hypersensitivity reactions requiring hospitalization. [See Warnings and Precautions (5.1).]

5 WARNINGS AND PRECAUTIONS

5.1 Allergic Reactions

Hypersensitivity reactions (e.g., pruritus, rash, urticaria), including some serious events (e.g., hypersensitivity vasculitis, angioedema, and hypersensitivity reactions requiring hospitalization), have been reported with PRALUENT treatment. If signs or symptoms of serious allergic reactions occur, discontinue treatment with PRALUENT, treat according to the standard of care, and monitor until signs and symptoms resolve [see Contraindications (4)].

6 ADVERSE REACTIONS

The following adverse reactions are also discussed in the other sections of the labeling:

• Allergic Reactions [see Warnings and Precautions (5.1).]

6.1 Clinical Trials Experience

Because clinical trials are conducted under widely varying conditions, adverse reaction rates observed in the clinical trials of a drug cannot be directly compared to rates in the clinical trials of another drug and may not reflect the rates observed in practice. Common Adverse Reactions

The data in Table 1 are derived from 9 primary hyperlipidemia placebo-controlled trials that included 2476 patients treated with PRALUENT 75 mg and/or 150 mg every 2 weeks, including 2135 exposed for 6 months and 1999 exposed for more than 1 year (median treatment duration of 65 weeks). The mean age of the population was 59 years, 40% of the population were women, 90% were Caucasian, 4% were Black or African American, and 3% were Asian. Adverse reactions reported in at least 2% of PRALUENT-treated patients, and more frequently than in placebo-treated patients, are shown in Table 1.

### Table 1: Adverse Reactions Occurring in Greater Than or Equal to 2% of PRALUENT-Treated Patients and More Frequently Than with Placebo

<table>
<thead>
<tr>
<th>Adverse Reactions</th>
<th>Placebo (N=1276)</th>
<th>PRALUENT* (N=2476)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nasopharyngitis</td>
<td>11.1%</td>
<td>11.3%</td>
</tr>
<tr>
<td>Injection site reactions†</td>
<td>5.1%</td>
<td>7.2%</td>
</tr>
<tr>
<td>Influenza</td>
<td>4.6%</td>
<td>5.7%</td>
</tr>
<tr>
<td>Urinary tract infection</td>
<td>4.6%</td>
<td>4.8%</td>
</tr>
<tr>
<td>Diarrhea</td>
<td>4.4%</td>
<td>4.7%</td>
</tr>
<tr>
<td>Bronchitis</td>
<td>3.8%</td>
<td>4.3%</td>
</tr>
<tr>
<td>Myalgia</td>
<td>3.4%</td>
<td>4.2%</td>
</tr>
<tr>
<td>Muscle spasms</td>
<td>2.4%</td>
<td>3.1%</td>
</tr>
<tr>
<td>Sinusitis</td>
<td>2.7%</td>
<td>3.0%</td>
</tr>
<tr>
<td>Cough</td>
<td>2.3%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Contusion</td>
<td>1.3%</td>
<td>2.1%</td>
</tr>
<tr>
<td>Musculoskeletal pain</td>
<td>1.6%</td>
<td>2.1%</td>
</tr>
</tbody>
</table>

†Includes erythema/redness, itching, swelling, pain/tenderness

Adverse reactions led to discontinuation of treatment in 5.3% of patients treated with PRALUENT and 5.1% of patients treated with placebo. The most common adverse reactions leading to treatment discontinuation in patients treated with PRALUENT were allergic reactions (0.6% versus 0.2% for PRALUENT and placebo, respectively) and elevated liver enzymes (0.3% versus <0.1%).

In an analysis of ezetimibe-controlled trials in which 864 patients were exposed to PRALUENT for a median of 27 weeks and 618 patients were exposed to ezetimibe for a median of 24 weeks, the types and frequencies of common adverse reactions were similar to those listed above.

In a cardiovascular outcomes trial in which 9451 patients were exposed to PRALUENT for a median of 31 months and 9443 patients were exposed to placebo for a median of 32 months, common adverse reactions (greater than 5% of patients treated with PRALUENT and occurring more frequently than placebo) included non-cardiac chest pain (7.0% PRALUENT, 6.8% placebo), nasopharyngitis (6.0% PRALUENT, 5.6% placebo), and myalgia (5.6% PRALUENT, 5.3% placebo).

Local Injection Site Reactions

In a pool of placebo-controlled trials evaluating PRALUENT 75 mg and/or 150 mg administered every 2 weeks (Q2W), local injection site reactions including erythema/tenderness/swelling, i.e., reactions at injection sites were more frequently reported in patients treated with PRALUENT (7.2% versus 5.1% for PRALUENT and placebo, respectively). Few patients discontinued treatment because of these reactions (0.2% versus 0.4% for PRALUENT and placebo, respectively), but patients receiving PRALUENT had a greater number of injection site reactions, had more reports of associated symptoms, and had reactions of longer average duration than patients receiving placebo.

In a 48-week placebo-controlled trial evaluating PRALUENT 300 mg every 4 weeks (Q4W) and 75 mg Q2W, in which all patients received an injection of drug or placebo every 2 weeks to maintain the blinded status, local injection site reactions were reported more frequently in patients treated with PRALUENT 300 mg Q4W as compared to those receiving PRALUENT 75 mg Q2W or placebo (16.6%, 9.6%, and 7.9%, respectively). Three patients (0.7%) treated with PRALUENT 300 mg Q4W discontinued treatment due to local injection site reactions versus no patients (0%) in the other 2 treatment groups.

In a cardiovascular outcomes trial, local injection site reactions were reported in 3.8% of patients treated with PRALUENT versus 2.1% of patients treated with placebo, and led to permanent discontinuation in 26 patients (0.3%) versus 3 patients (<0.1%), respectively.

Allergic Reactions

Adverse reactions were reported more frequently in patients treated with PRALUENT than in those treated with placebo (8.6% versus 7.8%). The proportion of patients who discontinued treatment due to allergic reactions was higher among those treated with PRALUENT (0.6% versus 0.2%). Serious allergic reactions, such as hypersensitivity, nummular eczema, and hypersensitivity vasculitis were reported in patients using PRALUENT in controlled clinical trials [see Warnings and Precautions (5.1)].

Liver Enzyme Abnormalities

In the primary hyperlipidemia trials, liver-related disorders (primarily related to abnormalities in liver enzymes) were reported in 2.5% of patients treated with PRALUENT and 1.8% of patients treated with placebo, leading to treatment discontinuation in 0.4% and 0.2% of patients, respectively. Increases in serum transaminases to greater than 3 times the upper limit of normal occurred in 1.7% of patients treated with PRALUENT and 1.4% of patients treated with placebo.

Low LDL-C Values

In the placebo-controlled and active-controlled primary hyperlipidemia trials using an every other day or every 4 week dosing interval, 914 PRALUENT-treated patients had two consecutive calculated LDL-C values <25 mg/dL, and 335 had two consecutive calculated LDL-C values <15 mg/dL. LDL-C values <25 mg/dL and <15 mg/dL were observed more frequently in patients treated with the PRALUENT 150 mg Q2W or 300 mg Q4W dosing regimen. Changes to background lipid-altering therapy (e.g., maximally tolerated statins) were not made in response to low LDL-C values in these trials, and PRALUENT dosing was not modified or interrupted on this basis.

In a cardiovascular outcomes trial, 4305 PRALUENT-treated patients had two consecutive calculated LDL-C values <25 mg/dL and 782 had two consecutive calculated LDL-C values <15 mg/dL. Because PRALUENT dosing was decreased or discontinued in the event of two consecutive LDL-C values <15 mg/dL in this trial, the effects of prolonged very low LDL-C with PRALUENT are unknown.

In published genetic studies as well as clinical and observational trials with lipid lowering therapies, an increased risk of new onset of diabetes has been associated with lower levels of LDL-C.

6.2 Immunogenicity

As with all therapeutic proteins, there is a potential for immunogenicity with PRALUENT. The detection of antibody formation is highly dependent on the sensitivity and specificity of the assay. Additionally, the observed incidence of antibody (including neutralizing antibody) positivity in an assay may be influenced by several factors including assay methodology, sample handling, timing of sample collection, concomitant medications, and underlying disease. For these reasons, comparison of the incidence of antibodies to PRALUENT in the studies described below with the incidence of antibodies in other studies or to other products may be misleading.

In a cardiovascular outcomes trial, 5.5% (504/9091) of patients treated with PRALUENT 75 mg and/or 150 mg every 2 weeks (Q2W) had anti-drug antibodies (ADA) detected after initiating treatment compared with 1.6% (149/9097) of patients treated with placebo. Persistent ADA responses, defined as at least 2 consecutive post-baseline samples with positive ADA separated by at least a 16-week period, were observed in 0.7% of patients treated with PRALUENT and 0.4% of patients treated with placebo. Neutralizing antibody (NAB) responses were observed in 0.5% of patients treated with PRALUENT and in <0.1% of patients treated with placebo. Efficacy and reductions in LDL-C were similarly observed in patients with or without ADA. However, some patients treated with PRALUENT with persistent or neutralizing antibodies experienced attenuation in LDL-C efficacy. A higher incidence of injection site reactions were observed in patients with treatment-emergent ADA compared to patients who were ADA negative (7.5% vs 3.6%). In a pool of ten placebo-controlled and active-controlled trials of patients treated with PRALUENT 75 mg and/or 150 mg Q2W as well as in a separate clinical study of patients treated with PRALUENT 75 mg Q2W or 300 mg every 4 weeks (including some patients with dose adjustment to 150 mg Q2W), the incidence of detecting ADA and NAb was similar to the results from the trial described above.

The long-term consequences of continuing PRALUENT treatment in the presence of ADA are unknown.

6.3 Postmarketing Experience

The following adverse reactions have been reported during postapproval use of PRALUENT. Because these reactions are reported voluntarily from a population of uncertain size, it is not always possible to reliably estimate their frequency or establish a causal relationship to drug exposure.

• General disorders and administration site conditions
  • Flu-like illness
  • Allergic reactions
  • Angioedema
8 USE IN SPECIFIC POPULATIONS
8.1 Pregnancy
Pregnancy Exposure Registry
There is a pregnancy exposure registry that monitors pregnancy outcomes in women exposed to PRALUENT during pregnancy. Please contact 1-877-311-8972 or go to https://mothertobaby.org/ongoing-study/praluent/ to enroll in or to obtain information about the registry.

Risk Summary
There are no available data on use of PRALUENT in pregnant women to inform a drug-associations risk. In animal reproduction studies, there were no effects on embryonic development when rats were subcutaneously administered alirocumab during organogenesis at dose exposures up to 12-fold the exposure at the maximum recommended human dose of 150 mg every two weeks. In monkeys, suppression of the humoral immune response to keyhole limpet hemocyanin (KLH) antigen was observed in infant monkeys at 4 to 6 months of age when alirocumab was dosed during organogenesis to parturition at 15 mg/kg/week and 75 mg/kg/week by the subcutaneous route, corresponding to 13-fold and 81-fold the human exposure to the maximum recommended human dose of 150 mg every two weeks, based on serum AUC. The lowest dose tested in the monkey resulted in humoral immune suppression; therefore, it is unknown if this effect would be observed at clinical exposure. No study designed to challenge the immune system of infant monkeys was conducted. No additional embryo-fetal,-prenatal or postnatal effects were observed in infant monkeys, and no maternal effects were observed, when alirocumab was dosed at up to 75 mg/kg/week by the subcutaneous route, corresponding to maternal exposure of 81-fold the exposure at the maximum recommended human dose of 150 mg every two weeks, based on serum AUC.

8.2 Lactation
Risk Summary
There is no information regarding the presence of alirocumab in human milk, the effects on the breastfed infant, or the effects on milk production. The median apparent half-life of alirocumab is reduced to 12 days when administered with food. No data are available in patients with moderate or severe hepatic impairment. [See Clinical Pharmacology (12.3)].

8.3 Pediatric Use
Safety and efficacy in pediatric patients have not been established.

8.4 Geriatric Use
In primary hypercholesterolemia controlled trials, 1158 patients treated with PRALUENT were ≥65 years of age and 241 patients treated with PRALUENT were ≥75 years of age. Age, weight, gender, race, and creatinine clearance were found not to significantly influence alirocumab pharmacokinetics. No dose adjustments are recommended for these demographics.

8.5 NONCLINICAL TOXICOLOGY
12.1 Mechanism of Action
Alirocumab is a human monoclonal antibody that binds to proprotein convertase subtilisin kexin type 9 (PCSK9). PCSK9 binds to the low-density lipoprotein receptors (LDLR) on the liver surface, and stimulation of LDLR degradation within the liver. LDLR is the primary receptor that clears circulating LDL, therefore the decrease in LDL levels by PCSK9 inhibition results in higher blood levels of LDL-C. By inhibiting the binding of PCSK9 to LDLR, alirocumab increases the number of LDLR available to clear LDL, thereby lowering LDL-C levels.

12.2 Pharmacodynamics
Alirocumab reduced free PCSK9 in a concentration-dependent manner. Following a single subcutaneous administration of alirocumab 75 mg or 150 mg, maximal suppression of free PCSK9 occurred within 4 to 8 hours. Free PCSK9 concentrations returned to baseline when alirocumab concentrations decreased below the limit of quantitation.

12.3 Pharmacokinetics
Absorption
After subcutaneous (SC) administration of 75 mg to 300 mg alirocumab, median times to maximum serum concentrations (tmax) were 3–7 days. The pharmacokinetics of alirocumab after single SC administration of 75 mg into the abdomen, upper arm, or thigh were similar. The absolute bioavailability of alirocumab after SC administration was about 80% as determined by population pharmacokinetic analysis. A slightly greater than dose proportional increase was observed, with a 2.1-fold to 2.7-fold increase in total alirocumab concentrations for a 2-fold increase in dose from 75 mg every 2 weeks to 150 mg every 2 weeks. Monthly dose normalized exposure with 300 mg every 4 weeks treatment was similar to that of 150 mg every 2 weeks. Steady state was reached after 2 to 3 doses with an accumulation ratio up to a maximum of about 2-fold.

Distribution
Following IV administration, the volume of distribution was about 0.04 to 0.05 L/kg indicating that alirocumab is distributed primarily in the circulatory system.

Metabolism and Elimination
Specific metabolism studies were not conducted, because alirocumab is a protein. Alirocumab is expected to degrade to small peptides and individual amino acids. In clinical studies, alirocumab was administered in combination with atorvastatin or rosuvastatin, no relevant changes in statin concentrations were observed in the presence of repeated administration of alirocumab, indicating that cytochrome P450 enzymes (mainly CYP3AA4 and CYP2C9) and transporter proteins such as P-gp and OATP were not affected by alirocumab.

Two elimination phases were observed for alirocumab. At low concentrations, the elimination is predominately through saturable binding to target (PCSK9), while at higher concentrations the elimination of alirocumab is largely through a non-saturable proteolytic pathway.

Based on a population pharmacokinetic analysis, the median apparent half-life of alirocumab at steady state was 17 to 20 days in patients receiving alirocumab at subcutaneous doses of 75 mg Q2W or 150 mg Q2W.

Specific Populations
Population pharmacokinetic analysis was conducted on data from 2799 patients. Age, body weight, gender, race, and creatinine clearance were found not to significantly influence alirocumab pharmacokinetics. No dose adjustments are recommended for these demographics.

PRALUENT has not been studied in pediatric patients [see Use in Specific Populations (8.4)].

13 NONCLINICAL TOXICOLOGY
13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility
Carcinogenicity studies have not been conducted with alirocumab. The mutagenic potential of alirocumab has not been evaluated; however, monoclonal antibodies are not expected to alter DNA or chromosomes. There were no adverse effects on surrogate markers of fertility (e.g., estrous cyclicity, ovulation rate, corpora lutea numbers) compared to controls in a 6-month chronic toxicity study in sexually-mature monkeys subcutaneously administered at 5, 15, and 75 mg/kg/week at systemic exposures up to 103-fold the 150 mg every two weeks subcutaneous clinical dose based on serum AUC. In addition, there were no adverse alirocumab-related anatomic pathology or histopathology findings in reproductive tissues in rat or monkey toxicity studies at systemic exposures up to 11-fold and 103-fold respectively, in the 6-month studies, compared to clinical systemic exposure with a 150 mg every two weeks dose on serum AUC.

13.2 Animal Toxicology and/or Pharmacology
During a 13-week toxicity study of 75 mg/kg once weekly alirocumab in combination with 40 mg/kg once daily atorvastatin in adult monkeys, there were no effects of PRALUENT on the humoral immune response to keyhole limpet hemocyanin (KLH) after Each 75 mg/mL pre-filled pen or pre-filled syringe contains 75 mg alirocumab, histidine (8 mM), polysorbate 20 (0.1 mg), sucrose (100 mg), and Water for Injection USP, to pH 6.0. Each 150 mg/mL pre-filled pen or pre-filled syringe contains 150 mg alirocumab, histidine (6 mM), polysorbate 20 (0.1 mg), sucrose (100 mg), and Water for Injection USP, to pH 6.0.
one to two months at exposures 100-fold greater than the exposure at the maximum recommended human dose of 130 mg every two weeks, based on AUC.

14 CLINICAL STUDIES

14.1 Prevention of Cardiovascular Events

Study 1 (ODYSSEY OUTCOMES, NCT01663402) was a multicenter, double-blind, placebo-controlled trial in 18,924 adult patients (9462 PRALUENT; 9462 placebo) followed for up to 5 years. Patients had an acute coronary syndrome (ACS) event 4 to 52 weeks prior to randomization and were treated with a lipid-modifying–therapy (LMT) regimen that was statin-intensive (defined as atorvastatin 40 or 80 mg, or rosuvastatin 20 or 40 mg) or at maximally tolerated dose of a statin, with or without other LMT. Patients were randomized to receive either PRALUENT 75 mg once every two weeks (Q2W) or placebo Q2W. The PRALUENT 300 mg Q4W dose [see Dosage and Administration (2.1)] was not evaluated in this study.

At month 2, if additional LDL-C lowering was required based on pre-specified LDL-C criteria (LDL-C >250 mg/dL), PRALUENT was adjusted to 150 mg Q2W. For patients who had their dose adjusted to 150 mg Q2W and who had two consecutive LDL-C values below 25 mg/dL, down-titration from 150 mg Q2W to 75 mg Q2W was performed. Patients on 75 mg Q2W who had two consecutive LDL-C values below 15 mg/dL were switched to placebo in a blinded fashion. Approximately 2615 (27.7%) of 9451 patients treated with PRALUENT required dose adjustment to 150 mg Q2W. Of these 2615 patients, 805 (30.8%) were down-titrated to 75 mg Q2W. Overall, 730 (7.7%) of 9451 patients switched to placebo.

A total of 99.5% of patients were followed for survival until the end of the trial. The median follow-up duration was 33 months.

The mean age at baseline was 59 years (range 39–92), with 25% women, and 27% at least 65 years old. The trial population was 73% Caucasian, 3% Black, and 13% Asian; 17% identified as Hispanic/Latino ethnicity. The index ACS event was a myocardial infarction in 83% of patients and unstable angina in 17% of patients. Prior to the index ACS event, 19% had prior myocardial infarction and 23% had coronary revascularization procedures (CABG/PCI). Selected additional baseline risk factors included hypertension (65%), diabetes mellitus (25%), New York City Association class I or II congestive heart failure (15%), and eGFR <60 mL/min/1.73 m² (13%). Most patients (89%) were receiving statin-intensive therapy with or without other LMT at randomization. The mean LDL-C value at baseline was 92.4 mg/dL.

PRALUENT significantly reduced the risk for the primary composite endpoint (time to first occurrence of coronary heart disease death, non-fatal myocardial infarction, and fatal or non-fatal ischemic stroke, or unstable angina requiring hospitalization: p=0.0003). The results are presented in Table 2.

Table 2: Cardiovascular Outcomes in Patients with Established Cardiovascular Disease

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>N=9462</th>
<th>Placebo N=9462</th>
<th>Hazard Ratio (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary composite endpoint</strong></td>
<td>903 (9.5%)</td>
<td>1052 (11.1%)</td>
<td>0.85 (0.78, 0.93)</td>
</tr>
<tr>
<td><strong>Components of the Primary Composite Endpoint</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHD death</td>
<td>205 (2.2%)</td>
<td>222 (2.3%)</td>
<td>0.92 (0.76, 1.11)</td>
</tr>
<tr>
<td>Non-fatal MI‡</td>
<td>626 (6.6%)</td>
<td>722 (7.6%)</td>
<td>0.86 (0.77, 0.96)</td>
</tr>
<tr>
<td>Fatal or non-fatal ischemic stroke§</td>
<td>111 (1.2%)</td>
<td>152 (1.6%)</td>
<td>0.73 (0.57, 0.93)</td>
</tr>
<tr>
<td>Unstable angina requiring hospitalization§</td>
<td>37 (0.4%)</td>
<td>60 (0.6%)</td>
<td>0.61 (0.41, 0.92)</td>
</tr>
<tr>
<td><strong>Mortality Endpoint (not statistically significant per pre-specified method to control for type I error)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All-cause mortality</td>
<td>334 (3.5%)</td>
<td>392 (4.1%)</td>
<td>0.85 (0.73, 0.98)</td>
</tr>
</tbody>
</table>

‡Primary composite endpoint defined as: time to first occurrence of coronary heart disease death, non-fatal myocardial infarction, fatal and non-fatal ischemic stroke, or unstable angina requiring hospitalization.
§First occurrence of specified event at any time; patients may have experienced more than one adjudicated event.
§Statistical testing performed outside hierarchy; therefore not considered statistically significant.

The Kaplan-Meier estimates of the cumulative incidence of the primary endpoint over time is presented in Figure 1.

Figure 1: Primary Composite Endpoint Cumulative Incidence over 4 Years in ODYSSEY OUTCOMES

14.2 Primary Hyperlipidemia (including heterozygous familial hypercholesterolemia)

Study 2 (ODYSSEY LONG TERM, NCT01507831) was a multicenter, double-blind, placebo-controlled trial that randomly assigned 1553 patients to PRALUENT 150 mg Q2W and 786 patients to placebo. All patients were taking maximally tolerated doses of statins with or without other lipid-modifying therapy, and required additional LDL-C reduction. The mean age was 61 years (range 18–89), 38% were women, 93% were Caucasian, 3% were Black, and 5% were Hispanic/Latino. The average LDL-C at baseline was 122 mg/dL. The proportion of patients who prematurely discontinued study drug prior to the 24-week primary endpoint was 8% among those treated with PRALUENT and 8% among those treated with placebo.

At week 24, the treatment difference between PRALUENT and placebo in mean LDL-C percent change was -58% (95% CI: -61%, -56%; p-value: <0.0001). For additional results see Table 3 and Figure 2.

Table 3: Mean Percent Change from Baseline and Difference* from Placebo in Lipid Parameters at Week 24 in ODYSSEY LONG TERM

<table>
<thead>
<tr>
<th>Treatment Group</th>
<th>LDL-C</th>
<th>Total-C</th>
<th>Non-HDL-C</th>
<th>Apo B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Placebo</td>
<td>-58</td>
<td>-36</td>
<td>-49</td>
<td>-50</td>
</tr>
<tr>
<td>PRALUENT (150 mg)</td>
<td>-58 (-61, -56)</td>
<td>-36 (-37, -34)</td>
<td>-50 (-52, -47)</td>
<td>-51 (-53, -48)</td>
</tr>
</tbody>
</table>

*Difference is PRALUENT minus Placebo

A pattern-mixture model approach was used with multiple imputation of missing post-treatment values based on a patient’s own baseline value and multiple imputation of missing on-treatment values based on a model including available on-treatment values.

Figure 2: Mean Percent Change from Baseline in LDL-C Over 52 Weeks in Patients on Maximally Tolerated Statin Treated with PRALUENT 150 mg Q2W and Placebo Q2W (ODYSSEY LONG TERM)
Study 3 (ODYSSEY COMBO I, NCT01644175) was a multicenter, double-blind, placebo-controlled trial that randomly assigned 209 patients to PRALUENT and 107 patients to placebo. Patients were taking maximally tolerated doses of statins with or without other lipid-modifying therapy, and required additional LDL-C reduction. The mean age was 63 years (range 39–87), 34% were women, 82% were Caucasian, 16% were Black, and 11% were Hispanic/Latino. Mean baseline LDL-C was 102 mg/dL.

The proportion of patients who prematurely discontinued study drug prior to the 24-week primary endpoint was 11% among those treated with PRALUENT and 12% among those treated with placebo.

At week 12, the mean percent change from baseline in LDL-C was -45% with PRALUENT compared to 1% with placebo, and the treatment difference between PRALUENT 75 mg Q2W and placebo in mean LDL-C percent change was -46% (95% CI: -53%, -39%). At week 12, if additional LDL-C lowering was required based on pre-specified LDL-C criteria, PRALUENT was up-titrated to 150 mg Q2W for the remainder of the trial. The dose was up-titrated to 150 mg Q2W in 32 (17%) of 191 patients treated with PRALUENT for at least 12 weeks.

Studies 4 (ODYSSEY FH I, NCT01623115) and 5 (ODYSSEY FH II, NCT01709500) were multicenter, double-blind, placebo-controlled trials that, combined, randomly assigned 490 patients to PRALUENT and 245 patients to placebo. The trials were similar with regard to both design and eligibility criteria. All patients had HeFH, were taking a maximally tolerated dose of statin with or without other lipid-modifying therapy, and required additional LDL-C reduction. The diagnosis of HeFH was made either by genotyping or clinical criteria (“definite FH” using either the Simon Broome or WHO/Dutch Lipid Network criteria). The mean age was 52 years (range 20–87), 45% were women, 94% were Caucasian, 1% were Black, and 3% were Hispanic/Latino. The average LDL-C at baseline was 141 mg/dL.

Considering both trials together, the proportion of patients who prematurely discontinued study drug prior to the 24-week primary endpoint was 6% among those treated with PRALUENT and 4% among those treated with placebo.

At week 12, the treatment difference between PRALUENT 75 mg Q2W and placebo in mean LDL-C percent change was -48% (95% CI: -52%, -44%).

At week 12, if additional LDL-C lowering was required based on pre-specified LDL-C criteria, PRALUENT was up-titrated to 150 mg Q2W for the remainder of the trial. The dose was up-titrated to 150 mg Q2W in 196 (42%) of 469 patients treated with PRALUENT and 245 patients to placebo. The trials were similar with regard to both design and eligibility criteria. All patients had HeFH, were taking a maximally tolerated dose of statin with or without other lipid-modifying therapy, and required additional LDL-C reduction. The diagnosis of HeFH was made either by genotyping or clinical criteria (“definite FH” using either the Simon Broome or WHO/Dutch Lipid Network criteria). The mean age was 52 years (range 20–87), 45% were women, 94% were Caucasian, 1% were Black, and 3% were Hispanic/Latino. The average LDL-C at baseline was 141 mg/dL.

Considering both trials together, the proportion of patients who prematurely discontinued study drug prior to the 24-week primary endpoint was 6% among those treated with PRALUENT and 4% among those treated with placebo.

At week 12, the treatment difference between PRALUENT 75 mg Q2W and placebo in mean LDL-C percent change was -48% (95% CI: -52%, -44%).

At week 12, if additional LDL-C lowering was required based on pre-specified LDL-C criteria, PRALUENT was up-titrated to 150 mg Q2W for the remainder of the trial. The dose was up-titrated to 150 mg Q2W in 32 (17%) of 191 patients treated with PRALUENT for at least 12 weeks.

At week 24, the mean percent change from baseline in LDL-C was -44% with PRALUENT and -2% with placebo, and the treatment difference between PRALUENT and placebo in mean LDL-C percent change was -42% (95% CI: -49%, -35%; p-value: <0.0001). The LDL-C-lowering effect was sustained to week 52.

For additional results see Table 4 and Figure 3.

### Table 4: Mean Percent Change from Baseline and Difference from Placebo in Lipid Parameters at Week 12 and Week 24 in Patients with HeFH (ODYSSEY FH I and FH II Pooled)

<table>
<thead>
<tr>
<th>Treatment Group</th>
<th>LDL-C (%)</th>
<th>Total-C (%)</th>
<th>Non-HDL-C (%)</th>
<th>Apo B (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Week 12 (Mean Percent Change from Baseline)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Placebo</td>
<td>-43</td>
<td>-27</td>
<td>-38</td>
<td>-34</td>
</tr>
<tr>
<td>PRALUENT (75 mg)</td>
<td>-48 (92, 94)</td>
<td>-31 (93, 98)</td>
<td>-42 (94, 93)</td>
<td>-36 (93, 93)</td>
</tr>
<tr>
<td><strong>Week 24 (Mean Percent Change from Baseline)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Placebo</td>
<td>-54 (95, 95)</td>
<td>-36 (95, 93)</td>
<td>-42 (94, 93)</td>
<td>-42 (94, 93)</td>
</tr>
<tr>
<td>PRALUENT (75 mg)*</td>
<td>-47</td>
<td>-30</td>
<td>-42</td>
<td>-40</td>
</tr>
<tr>
<td><strong>Difference from Placebo (Mean Percent Change from Baseline)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Placebo</td>
<td>-54 (95, 95)</td>
<td>-36 (93, 93)</td>
<td>-42 (94, 93)</td>
<td>-42 (94, 93)</td>
</tr>
</tbody>
</table>

- Difference is PRALUENT minus Placebo
- LDL-C, Total-C, Non-HDL-C, Apo B are expressed as mean (95% CI) from Table 4 and Figure 3.

At week 12, the mean percent change from baseline in LDL-C was -48% (95% CI: -52%, -44%). The LDL-C-lowering effect was sustained to week 52.

For additional results see Table 4 and Figure 3.

### Figure 3: Mean Percent Change from Baseline in LDL-C Over 52 Weeks in Patients with HeFH on Maximally Tolerated Statin Treated with PRALUENT 75/150 mg Q2W and Placebo Q2W (ODYSSEY FH I and FH II Pooled)*

- The means were estimated based on all randomized patients, with multiple imputation of missing data taking into account treatment adherence.
- *The means were estimated based on all randomized patients, with multiple imputation of missing data taking into account treatment adherence.

At week 12, if additional LDL-C lowering was required based on pre-specified LDL-C criteria, PRALUENT was adjusted to 150 mg Q2W for the remainder of the trial. The dose was adjusted to 150 mg Q2W in approximately 20% of patients treated with PRALUENT 75 mg Q2W or 300 mg Q4W for at least 12 weeks.
At week 24, the treatment difference between initial assignment to PRALUENT 300 mg Q4W and placebo in mean percent change in LDL-C from baseline was -56% (97.5% CI: -62%, -49%; p-value: <0.0001), and the treatment difference between initial assignment to PRALUENT 75 mg Q2W and placebo in mean percent change in LDL-C from baseline was -48% (97.5% CI: -57%, -39%).

In the cohort of patients not treated with a concomitant statin, the mean LDL-C at baseline was 142 mg/dL. The treatment difference between PRALUENT and placebo were similar to the cohort of patients treated with a concomitant statin.

**Study 8** (ODYSSEY ESCAPE, NCT023266220) was a multicenter, double-blind, placebo-controlled trial that randomly assigned patients with HeFH who were undergoing LDL apheresis to PRALUENT 150 mg Q2W (N=41) or placebo (N=21). Patients were treated in combination with their usual LDL apheresis schedule for 6 weeks. The mean age was 59 years (range 27-79), 42% were women, 97% were Caucasian, 3% were Black, and 0% were Hispanic/Latino. The mean LDL-C at baseline, measured before the apheresis procedure, was 181 mg/dL. The proportion of patients who discontinued study drug prior to the 6-week endpoint was 2% among those treated with PRALUENT 150 mg Q2W and 5% among those treated with placebo. At week 6, the mean percent change from baseline in pre-apheresis LDL-C was -53% in patients in the PRALUENT group compared to 1% in patients who received placebo.

**Study 9** (ODYSSEY COMBO II, NCT01644188) was a multicenter, double-blind, ezetimibe-controlled trial that randomly assigned 479 patients to PRALUENT 75 mg Q2W/150 mg Q2W and 241 patients to ezetimibe 10 mg/day. Patients were taking a maximally tolerated dose of a statin and required additional LDL-C reduction.

The mean age was 62 years (range 29-88), 26% were women, 85% were Caucasian, 4% were Black, and 3% were Hispanic/Latino. Mean baseline LDL-C was 107 mg/dL. The proportion of patients who prematurely discontinued study drug prior to the 24-week primary endpoint was 9% among those treated with PRALUENT and 10% among those treated with ezetimibe.

At week 12, the mean percent change from baseline in LDL-C was -50% with PRALUENT compared to -22% with ezetimibe, and the treatment difference between PRALUENT and ezetimibe in mean LDL-C percent change was -28% (95% CI: -32%, -23%). At week 24, the mean percent change from baseline in LDL-C for patients who received placebo.

At week 12, if additional LDL-C lowering was required based on pre-specified LDL-C criteria, PRALUENT was up-titrated to 150 mg Q2W for the remainder of the trial. The dose was up-titrated to 150 mg Q2W in 82 (18%) of 446 patients treated with PRALUENT for at least 12 weeks. At week 24, the mean percent change from baseline in LDL-C with PRALUENT and -20% with ezetimibe, and the treatment difference between PRALUENT and ezetimibe in mean LDL-C percent change was -8% (95% CI: -13%, -3%; p-value: <0.0001). Patients and caregivers should be cautioned that the pre-filled pen or pre-filled syringe must not be re-used and instructed in the technique of proper pen and syringe disposal in a puncture-resistant container. Do not recycle the container.

**Pack Size**

<table>
<thead>
<tr>
<th>Pack Size</th>
<th>75 mg/mL Pre-filled Pen</th>
<th>150 mg/mL Pre-filled Pen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pack of 1 pen</td>
<td>NDC 0024-5901-01</td>
<td>NDC 0024-5902-01</td>
</tr>
<tr>
<td>Pack of 2 pens</td>
<td>NDC 0024-5901-02</td>
<td>NDC 0024-5902-02</td>
</tr>
<tr>
<td>NDC 72733-5901-2</td>
<td>NDC 0024-5902-02</td>
<td></td>
</tr>
</tbody>
</table>

**Pack Size**

<table>
<thead>
<tr>
<th>Pack Size</th>
<th>75 mg/mL Pre-filled Syringe</th>
<th>150 mg/mL Pre-filled Syringe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pack of 1 syringe</td>
<td>NDC 0024-5903-01</td>
<td>NDC 0024-5904-01</td>
</tr>
<tr>
<td>Pack of 2 syringes</td>
<td>NDC 0024-5903-02</td>
<td>NDC 0024-5904-02</td>
</tr>
</tbody>
</table>

**Storage**

Store in a refrigerator at 36°F to 46°F (2°C to 8°C) in the original carton in order to protect from light.

**Pharmacy**

Do not freeze. Do NOT expose to extreme heat. Do NOT shake.
What should I tell my healthcare provider before using PRALUENT?
Before you start using PRALUENT, tell your healthcare provider about all of your medical conditions, including allergies, and if you:
- are pregnant or planning to become pregnant. It is not known if PRALUENT will harm your unborn baby. Tell your healthcare provider if you become pregnant while taking PRALUENT.
- are breastfeeding or plan to breastfeed. You should not do both without talking to your healthcare provider first.
- have been shown the right way by your healthcare provider or pharmacist.

Tell your healthcare provider or pharmacist about all the medicines you take, including prescription and over-the-counter medicines, vitamins, and herbal supplements.

How should I use PRALUENT?
- **See the detailed “Instructions for Use” that comes with this Patient Information about the right way to prepare and give your PRALUENT injections.**
- Use PRALUENT exactly as your healthcare provider tells you to use it.
- PRALUENT comes as a single-dose (1 time) pre-filled pen (autoinjector), or as a single-dose pre-filled syringe. Your healthcare provider will prescribe the type and dosage that is best for you.
- If your healthcare provider decides that you or a caregiver can give the injections of PRALUENT, you or your caregiver should receive training on the right way to prepare and give PRALUENT. Do not try to inject PRALUENT until you have been shown the right way by your healthcare provider or nurse.
- PRALUENT is injected under the skin (subcutaneously) every 2 weeks or every 4 weeks (monthly).
- If your healthcare provider prescribes you the monthly dose, you will give yourself 2 separate injections in a row, using a different syringe or pen for each injection and 2 different injection sites.
- Do not inject PRALUENT together with other injectable medicines at the same injection site.
- Always check the label of your pen or syringe to make sure you have the correct medicine and the correct dose of PRALUENT before each injection.
- If you forget to use PRALUENT or are not able to take the dose at your regular time, inject your missed dose as soon as you remember, within 7 days. Then, if you inject every 2 weeks take your next dose in 2 weeks from the day you missed your dose or if you inject every 4 weeks take your next dose in 4 weeks from the day you missed your dose. This will put you back on your original schedule.
- If you missed a dose by more than 7 days and you inject every 2 weeks wait until your next scheduled dose to re-start PRALUENT or if you inject every 4 weeks start a new schedule from the time you remember to take your dose. If you are not sure when to re-start PRALUENT, ask your healthcare provider or pharmacist.
- If you use more PRALUENT than you should, talk to your healthcare provider or pharmacist.
- Do not stop using PRALUENT without talking with your healthcare provider. If you stop using PRALUENT, your cholesterol levels can increase.

What are the possible side effects of PRALUENT?
PRALUENT can cause serious side effects, including:
- **allergic reactions.** PRALUENT may cause allergic reactions that can be severe and require treatment in a hospital. Stop using PRALUENT and call your healthcare provider or go to the nearest hospital emergency room right away if you have any symptoms of an allergic reaction including:
  - a severe rash
  - redness
  - hives
  - swelling of the face, lips, throat, or tongue

The most common side effects of PRALUENT include:
- redness, itching, swelling, pain, or tenderness at the injection site
- symptoms of the common cold
- flu or flu-like symptoms

Tell your healthcare provider if you have any side effect that bothers you or that does not go away.
These are not all of the possible side effects of PRALUENT. Ask your healthcare provider or pharmacist for more information.
Call your doctor for medical advice about side effects. You may report side effects to FDA at 1-800-FDA-1088.

General information about the safe and effective use of PRALUENT.
Medicines are sometimes prescribed for purposes other than those listed in a Patient Information leaflet. Do not use PRALUENT for a condition for which it was not prescribed. Do not give PRALUENT to other people, even if they have the same symptoms that you have. It may harm them.
This Patient Information summarizes the most important information about PRALUENT. If you would like more information, talk with your healthcare provider. You can ask your pharmacist or healthcare provider for information about PRALUENT that is written for health professionals.
For more information about PRALUENT, go to www.PRALUENT.com or call 1-844-PRALUENT (1-844-772-5836).

What are the ingredients in PRALUENT?
- **Active ingredient:** alirocumab
- **Inactive ingredients:** histidine, polysorbate 20, sucrose, and Water for Injection, USP.

Manufactured by: sanofi-aventis U.S. LLC, Bridgewater, NJ 08807; A SANOFI COMPANY. U.S. License # 1752; Marketed by: sanofi-aventis U.S. LLC (Bridgewater, NJ 08807) and Regeneron Pharmaceuticals, Inc. (Tarrytown, NY 10591) / PRALUENT is a registered trademark of Sanofi / ©2020 Regeneron Pharmaceuticals, Inc. / sanofi-aventis U.S. LLC

This Patient Information has been approved by the U.S. Food and Drug Administration. Revised: March 2020
Instructions For Use
PRALUENT® (PRAHL-u-ent)
(alirocumab)
Injection, for Subcutaneous Injection
Single-Dose Pre-Filled Pen (75 mg/mL)

Important Information
• The device is a single-dose disposable pen. It contains 75 mg of PRALUENT (alirocumab) in 1 mL.
• The PRALUENT pen contains medicine prescribed by your healthcare provider.
• The medicine is injected under your skin and can be given by yourself or someone else (caregiver).
• It is important that you do not try to give yourself or someone else the injection unless you have received training from your healthcare provider.
• This pen can only be used for 1 single injection, and must be discarded after use.
• Read all of the instructions carefully before using the PRALUENT pen.
• Follow these instructions every time you use a PRALUENT pen.
• Do not touch the yellow safety cover.
• Do not use the pen if it has been dropped or damaged.
• Do not use the pen if the blue cap is missing or not securely attached.
• Do not re-use a pen.

Storage of PRALUENT
• Store unused pens in the refrigerator at 36°F to 46°F (2°C to 8°C) in the original carton to protect from light.
• Do not freeze.
• Do not expose the pen to extreme heat or direct sunlight.
• Do not shake.
• PRALUENT should be allowed to warm to room temperature for 30 to 40 minutes before use.
• If needed, PRALUENT may be kept at room temperature up to 77°F (25°C) for 30 days in the original carton to protect from light. Do not store above 77°F (25°C).
• After PRALUENT is removed from the refrigerator it must be used within 30 days or thrown away.
• Keep the PRALUENT pens and all medicines out of the reach of children.

Keep this leaflet. If you have questions, ask your healthcare provider or call 1-844-PRALUENT (1-844-772-5836).
The parts of the PRALUENT pen are shown in this picture.

Step A: Getting ready for your injection
Before you start you will need:
• the PRALUENT pen
• 1 alcohol wipe
• 1 cotton ball or gauze
• a puncture-resistant container (see Step B8)

A1: Look at the label on the pen.
• Check that you have the correct product and the correct dose.
• Check the expiration date: do not use if this date has passed.

A2: Look at the window.
• Check the liquid is clear, colorless to pale yellow and free from particles (see Figure A).
• You may see an air bubble. This is normal.
• Do not use if the window appears solid yellow (see Figure B).
• Do not use this medicine if the solution is discolored or cloudy, or if it contains visible flakes or particles.

A3: Let the pen warm up at room temperature for 30 to 40 minutes.
• This is important for administering the entire dose and helps minimize discomfort.
• Take PRALUENT out of the refrigerator to warm up before using.
• Do not heat the pen, let it warm up on its own.
• Do not put the pen back in the refrigerator.

A4: Prepare the injection site.
• Wash your hands with soap and water and dry with a towel.
• Clean skin in the injection area with an alcohol wipe.
• You can inject into your (see below picture):
  o thighs
  o stomach (except for the 2 inch area around your navel)
  o upper arms
• You can stand or sit to give yourself an injection.
Important:
• Change (rotate) your injection site each time you give yourself an injection. If you need to use the same injection site, make sure it is not the same spot on the site you used last time.
• Do not inject into areas where the skin is injured, tender, hard, red, or hot. Do not inject PRALUENT into areas with visible veins, scars or stretch marks.

Step B: How to give your injection

B1: After completing all steps in “Step A: Getting ready for your injection”, pull off the blue cap.
• Do not pull off the cap until you are ready to inject.
• Do not put the blue cap back on.

B2: Hold the PRALUENT pen like this.
• Do not touch the yellow safety cover.
• Make sure you can see the window.

B3: Press the yellow safety cover on your skin at roughly a 90° angle.
• Press and firmly hold the pen against your body until the yellow safety cover is no longer visible. The pen will not work if the yellow safety cover is not depressed fully.
• If needed, pinch the skin to make sure the injection site is firm.

B4: Push and immediately release the green button with your thumb.
• You will hear a click. Your injection has now started.
• The window will start to turn yellow.

B5: Keep holding the pen against your skin after releasing the button.
• The injection may take up to 20 seconds.
• The time required for injection to give the entire dose may be longer than for other injectable medicines.

B6: Check the window has turned yellow, before removing the pen.
• Do not remove the pen until the entire window has turned yellow.
• Your injection is complete when the window has turned completely yellow, you may hear a second click.
• If the window does not turn completely yellow, call 1-844-772-5836 for help. Do not give yourself a second dose without speaking to your healthcare provider.

B7: Pull pen away from your skin.
• Do not rub the skin after the injection.
• If you see any blood, press a cotton ball or gauze on the site until the bleeding stops.
B8: Discard pen and cap.
- Do not put the blue cap back on.
- Throw away pen and cap in a puncture-resistant container immediately after they have been used.

Disposing of used pens:
- Put your used pens in a FDA-cleared sharps disposal container right away after use. Do not throw away (dispose of) pens and caps in your household trash.
- If you do not have a FDA-cleared sharps disposal container, you may use a household container that is:
  - made of a heavy-duty plastic,
  - can be closed with a tight-fitting, puncture-resistant lid, without sharps being able to come out,
  - upright and stable during use,
  - leak-resistant, and
  - properly labeled to warn of hazardous waste inside the container.
- When your sharps disposal container is almost full, you will need to follow your community guidelines for the right way to dispose of your sharps disposal container. There may be state or local laws about how you should throw away used needles and syringes. For more information about safe sharps disposal, and for specific information about sharps disposal in the state that you live in, go to the FDA’s website at: http://www.fda.gov/safesharpsdisposal.

Keep PRALUENT and all medicines out of the reach of children.

This Instructions for Use has been approved by the U.S. Food and Drug Administration.

Manufactured by:
sanofi-aventis U.S. LLC
Bridgewater, NJ 08807
A SANOFI COMPANY
U.S. License # 1752

Marketed by: sanofi-aventis U.S. LLC (Bridgewater, NJ 08807) and Regeneron Pharmaceuticals, Inc. (Tarrytown, NY 10591)
PRALUENT is a registered trademark of Sanofi

©2018 Regeneron Pharmaceuticals, Inc. / sanofi-aventis U.S. LLC

Revised: December 2018

Instructions For Use
PRALUENT® (PRAHL-u-ent)
(alirocumab)
Injection, for Subcutaneous Injection
Single-Dose Pre-Filled Pen (150 mg/mL)

Important Information
- The device is a single-dose disposable pen. It contains 150 mg of PRALUENT (alirocumab) in 1 mL.
- The PRALUENT pen contains medicine prescribed by your healthcare provider.
- The medicine is injected under your skin and can be given by yourself or someone else (caregiver).
- It is important that you do not try to give yourself or someone else the injection unless you have received training from your healthcare provider.
- This pen can only be used for 1 single injection, and must be discarded after use.
- Read all of the instructions carefully before using the PRALUENT pen.
- Follow these instructions every time you use a PRALUENT pen.
- Do not touch the yellow safety cover.
- Do not use the pen if it has been dropped or damaged.
- Do not use the pen if the blue cap is missing or not securely attached.
- Do not re-use a pen.

Storage of PRALUENT
- Store unused pens in the refrigerator at 36°F to 46°F (2°C to 8°C) in the original carton to protect from light.
- Do not freeze.
- Do not expose the pen to extreme heat or direct sunlight.
- Do not shake.
- PRALUENT should be allowed to warm to room temperature for 30 to 40 minutes before use.
- If needed, PRALUENT may be kept at room temperature up to 77°F (25°C) for 30 days in the original carton to protect from light. Do not store above 77°F (25°C). After PRALUENT is removed from the refrigerator it must be used within 30 days or thrown away.
- Keep the PRALUENT pens and all medicines out of the reach of children.

Keep this leaflet. If you have questions, ask your healthcare provider or call 1-844-PRALUENT (1-844-772-5836).

The parts of the PRALUENT pen are shown in this picture.

Step A: Getting ready for your injection
Before you start you will need:
- the PRALUENT pen
- 1 alcohol wipe
- 1 cotton ball or gauze
- a puncture-resistant container (see Step B8)
A1: Look at the label on the pen.
- Check that you have the correct product and the correct dose.
- Check the expiration date: do not use if this date has passed.

A2: Look at the window.
- Check the liquid is clear, colorless to pale yellow and free from particles (see Figure A).
- You may see an air bubble. This is normal.
- Do not use if the window appears solid yellow (see Figure B).
- Do not use this medicine if the solution is discolored or cloudy, or if it contains visible flakes or particles.

A3: Let the pen warm up at room temperature for 30 to 40 minutes.
- This is important for administering the entire dose and helps minimize discomfort.
- Take PRALUENT out of the refrigerator to warm up before using.
- Do not heat the pen, let it warm up on its own.
- Do not put the pen back in the refrigerator.

A4: Prepare the injection site.
- Wash your hands with soap and water and dry with a towel.
- Clean skin in the injection area with an alcohol wipe.
- You can inject into your (see below picture):
  - thighs
  - stomach (except for the 2 inch area around your navel)
  - upper arms
- You can stand or sit to give yourself an injection.

Important:
- Change (rotate) your injection site each time you give yourself an injection. If you need to use the same injection site, make sure it is not the same spot on the site you used last time.
- Do not inject into areas where the skin is injured, tender, hard, red, or hot. Do not inject PRALUENT into areas with visible veins, scars or stretch marks.

Step B: How to give your injection

B1: After completing all steps in “Step A: Getting ready for your injection”, pull off the blue cap.
- Do not pull off the cap until you are ready to inject.
- Do not put the blue cap back on.

B2: Hold the PRALUENT pen like this.
- Do not touch the yellow safety cover.
- Make sure you can see the window.

B3: Press the yellow safety cover on your skin at roughly a 90° angle.
- Press and firmly hold the pen against your body until the yellow safety cover is no longer visible. The pen will not work if the yellow safety cover is not depressed fully.
- If needed, pinch the skin to make sure the injection site is firm.
B4: Push and immediately release the gray button with your thumb.
- You will hear a click. Your injection has now started.
- The window will start to turn yellow.

B5: Keep holding the pen against your skin after releasing the button.
- The injection may take up to 20 seconds.
- The time required for injection to give the entire dose may be longer than for other injectable medicines.

B6: Check the window has turned yellow, before removing the pen.
- Do not remove the pen until the entire window has turned yellow.
- Your injection is complete when the window has turned completely yellow, you may hear a second click.
- If the window does not turn completely yellow, call 1-844-772-5836 for help. Do not give yourself a second dose without speaking to your healthcare provider.

B7: Pull pen away from your skin.
- Do not rub the skin after the injection.
- If you see any blood, press a cotton ball or gauze on the site until the bleeding stops.

B8: Discard pen and cap.
- Do not put the blue cap back on.
- Throw away pen and cap in a puncture-resistant container immediately after they have been used.

Disposing of used pens:
- Put your used pens in a FDA-cleared sharps disposal container right away after use. Do not throw away (dispose of) pens and caps in your household trash.
- If you do not have a FDA-cleared sharps disposal container, you may use a household container that is:
  - made of a heavy-duty plastic,
  - can be closed with a tight-fitting, puncture-resistant lid, without sharps being able to come out,
  - upright and stable during use,
  - leak-resistant, and
  - properly labeled to warn of hazardous waste inside the container.
- When your sharps disposal container is almost full, you will need to follow your community guidelines for the right way to dispose of your sharps disposal container. There may be state or local laws about how you should throw away used needles and syringes. For more information about safe sharps disposal, and for specific information about sharps disposal in the state that you live in, go to the FDA’s website at: http://www.fda.gov/safesharppdisposal.
- Do not dispose of your used sharps disposal container in your household trash unless your community guidelines permit this. Do not recycle your used sharps disposal container.

Keep PRALUENT and all medicines out of the reach of children.
This Instructions for Use has been approved by the U.S. Food and Drug Administration.

Manufactured by:
sanofi-aventis U.S. LLC
Bridgewater, NJ 08807
A SANOFI COMPANY
U.S. License # 1752

Marketed by: sanofi-aventis U.S. LLC (Bridgewater, NJ 08807) and Regeneron Pharmaceuticals, Inc. (Tarrytown, NY 10591)
PRALUENT is a registered trademark of Sanofi
©2018 Regeneron Pharmaceuticals, Inc. / sanofi-aventis U.S. LLC

Revised: December 2018
Instructions For Use
PRALUENT® (PRAHL-u-ent)
(alirocumab)
Injection, for Subcutaneous Injection
Single-Dose Pre-Filled Syringe (75 mg/mL)

Important Information
- The device is a single-dose pre-filled syringe. It contains 75 mg of PRALUENT (alirocumab) in 1 mL.
- The PRALUENT syringe contains medicine prescribed by your healthcare provider.
- The medicine is injected under your skin and can be given by yourself or someone else (caregiver).
- It is important that you do not try to give yourself or someone else the injection unless you have received training from your healthcare provider.
- This syringe can only be used for 1 single injection, and must be discarded after use.
- Read all of the instructions carefully before using the PRALUENT syringe.
- Follow these instructions every time you use a PRALUENT syringe.
- Do not touch the needle.
- Do not use the syringe if it has been dropped or damaged.
- Do not use the syringe if the gray needle cap is missing or not securely attached.
- Do not re-use a syringe.

Storage of PRALUENT
- Store unused syringes in the refrigerator at 36°F to 46°F (2°C to 8°C) in the original carton to protect from light.
- Do not freeze.
- Do not expose the syringe to extreme heat or direct sunlight.
- Do not shake.
- PRALUENT should be allowed to warm to room temperature for 30 to 40 minutes before use.
- If needed, PRALUENT may be kept at room temperature up to 77°F (25°C) for 30 days in the original carton to protect from light. Do not store above 77°F (25°C).
- After PRALUENT is removed from the refrigerator it must be used within 30 days or thrown away.
- Keep the PRALUENT syringes and all medicines out of the reach of children.

Keep this leaflet. If you have questions, ask your healthcare provider or call 1-844-PRALUENT (1-844-772-5836).
The parts of the PRALUENT syringe are shown in this picture.

Step A: Getting ready for your injection
Before you start you will need:
- the PRALUENT syringe
- 1 alcohol wipe
- 1 cotton ball or gauze
- a puncture-resistant container (see Step B6)
A1: Before you start.
- Take the syringe out of the packaging by holding the syringe body.
- Check the expiration date: do not use if this date has passed.

A2: Look at the label on the syringe.
- Check that you have the correct product and the correct dose (green plunger for 75 mg/mL).
- Check the liquid is clear, colorless to pale yellow and free from particles.
- Check that the syringe is not open or damaged.
- Do not use this medicine if the solution is discolored or cloudy, or if it contains visible flakes or particles.

A3: Let the syringe warm up at room temperature for 30 to 40 minutes.
- This is important for administering the entire dose and helps minimize discomfort.
- Take PRALUENT out of the refrigerator to warm up before using.
- Do not heat the syringe, let it warm up on its own.
- Do not put the syringe back in the refrigerator.

A4: Prepare the injection site.
- Wash your hands with soap and water and dry with a towel.
- Clean skin in the injection area with an alcohol wipe.
- You can inject into your (see below picture):
  - thighs
  - stomach (except for the 2 inch area around your navel)
  - upper arms
- You can stand or sit to give yourself an injection.
Important:
• Change (rotate) your injection site each time you give yourself an injection. If you need to use the same injection site, make sure it is not the same spot on the site you used last time.
• Do not inject into areas where the skin is injured, tender, hard, red, or hot. Do not inject PRALUENT into areas with visible veins, scars or stretch marks.

Step B: How to give your injection

B1: After completing all steps in “Step A: Getting ready for your injection”, pull off the needle cap.
• Do not pull off the cap until you are ready to inject.
• Hold the syringe in the middle of the syringe body with the needle pointing away from you.
• Keep your hand away from the plunger.
• Do not try to remove any air bubbles in the syringe before the injection.
• Do not put the gray cap back on the needle.

B2: If needed pinch the skin.
• Use your thumb and first finger to pinch a fold of skin at the injection site.
• Hold the skin like this during the entire injection.

B3: Insert the needle into the fold of skin with a quick dart-like motion.
• Inject the medicine at a 90° angle if you can pinch 2 inches of skin.
• Inject the medicine at a 45° angle if you can only pinch 1 inch of skin.

B4: Push the plunger down.
• Inject all of the medicine by slowly and steadily pushing down the plunger.
• You may have to push harder on the plunger than for other injectable medicines.

B5: Before you remove the needle check the syringe is empty.
• The time required for injection to give the entire dose may be longer than for other injectable medicines.
• Do not remove the syringe until it is completely empty.
• Pull the needle out of the skin at the same angle as it was inserted.
• Do not rub the skin after the injection.
• If you see any blood, press a cotton ball or gauze on the site until the bleeding stops.
B6: Discard syringe and cap.
• Do not put the gray needle cap back on.
• Do not re-use the syringe.
• Throw away syringe and cap in a puncture-resistant container immediately after they have been used.

Disposing of used prefilled syringes and needles:
• Put your used needles and syringes in a FDA-cleared sharps disposal container right away after use. Do not throw away (dispose of) loose needles and syringes in your household trash.
• If you do not have a FDA-cleared sharps disposal container, you may use a household container that is:
  o made of a heavy-duty plastic,
  o can be closed with a tight-fitting, puncture-resistant lid, without sharps being able to come out,
  o upright and stable during use,
  o leak-resistant, and
  o properly labeled to warn of hazardous waste inside the container.
• When your sharps disposal container is almost full, you will need to follow your community guidelines for the right way to dispose of your sharps disposal container. There may be state or local laws about how you should throw away used needles and syringes. For more information about safe sharps disposal, and for specific information about sharps disposal in the state that you live in, go to the FDA’s website at: http://www.fda.gov/safesharpsdisposal.
• Do not dispose of your used sharps disposal container in your household trash unless your community guidelines permit this. Do not recycle your used sharps disposal container.

Keep PRALUENT and all medicines out of the reach of children.

This Instructions for Use has been approved by the U.S. Food and Drug Administration.

Manufactured by:
sanofi-aventis U.S. LLC
Bridgewater, NJ 08807
A SANOFIG COMPANY
U.S. License # 1752

Marketed by: sanofi-aventis U.S. LLC (Bridgewater, NJ 08807)
and Regeneron Pharmaceuticals, Inc. (Tarrytown, NY 10591)

PRALUENT is a registered trademark of Sanofi

©2017 Regeneron Pharmaceuticals, Inc./sanofi-aventis U.S. LLC

Revised: July 2017
Step A: Getting ready for your injection

Before you start you will need:
- the PRALUENT syringe
- 1 alcohol wipe
- 1 cotton ball or gauze
- a puncture-resistant container (see Step B6)

A1: Before you start.
- Take the syringe out of the packaging by holding the syringe body.
- Check the expiration date: do not use if this date has passed.

A2: Look at the label on the syringe.
- Check that you have the correct product and the correct dose (gray plunger for 150 mg/mL).
- Check the liquid is clear, colorless to pale yellow and free from particles.
- Check that the syringe is not open or damaged.
- Do not use this medicine if the solution is discolored or cloudy, or if it contains visible flakes or particles.

A3: Let the syringe warm up at room temperature for 30 to 40 minutes.
- This is important for administering the entire dose and helps minimize discomfort.
- Take PRALUENT out of the refrigerator to warm up before using.
- Do not heat the syringe, let it warm up on its own.
- Do not put the syringe back in the refrigerator.

A4: Prepare the injection site.
- Wash your hands with soap and water and dry with a towel.
- Clean skin in the injection area with an alcohol wipe.
- You can inject into your (see below picture):
  - thighs
  - stomach (except for the 2 inch area around your navel)
  - upper arms
- You can stand or sit to give yourself an injection.

Important:
- Change (rotate) your injection site each time you give yourself an injection. If you need to use the same injection site, make sure it is not the same spot on the site you used last time.
- Do not inject into areas where the skin is injured, tender, hard, red, or hot. Do not inject PRALUENT into areas with visible veins, scars or stretch marks.

Step B: How to give your injection

B1: After completing all steps in “Step A: Getting ready for your injection”, pull off the needle cap.
- Do not pull off the cap until you are ready to inject.
- Hold the syringe in the middle of the syringe body with the needle pointing away from you.
- Keep your hand away from the plunger.
- Do not try to remove any air bubbles in the syringe before the injection.
- Do not put the gray cap back on the needle.

B2: If needed pinch the skin.
- Use your thumb and first finger to pinch a fold of skin at the injection site.
- Hold the skin like this during the entire injection.

B3: Insert the needle into the fold of skin with a quick dart-like motion.
- Inject the medicine at a 90° angle if you can pinch 2 inches of skin.
- Inject the medicine at a 45° angle if you can only pinch 1 inch of skin.
B4: Push the plunger down.
- Inject all of the medicine by slowly and steadily pushing down the plunger.
- You may have to push harder on the plunger than for other injectable medicines.

B5: Before you remove the needle check the syringe is empty.
- The time required for injection to give the entire dose may be longer than for other injectable medicines.
- Do not remove the syringe until it is completely empty.
- Pull the needle out of the skin at the same angle as it was inserted.
- Do not rub the skin after the injection.
- If you see any blood, press a cotton ball or gauze on the site until the bleeding stops.

B6: Discard syringe and cap.
- Do not put the gray needle cap back on.
- Do not re-use the syringe.
- Throw away syringe and cap in a puncture-resistant container immediately after they have been used.

Disposing of used prefilled syringes and needles:
- Put your used needles and syringes in a FDA-cleared sharps disposal container right away after use. Do not throw away (dispose of) loose needles and syringes in your household trash.
- If you do not have a FDA-cleared sharps disposal container, you may use a household container that is:
  - made of a heavy-duty plastic,
  - can be closed with a tight-fitting, puncture-resistant lid, without sharps being able to come out,