comprises that the anti-PCSK9 neutralizing antibody is to be administered to a subject that has received at least a moderate level of treatment by a statin, in an amount sufficient and time sufficient to lower the LDL-C level to less than 90 mg/dL, thereby decreasing a total atheroma volume in the subject.

[0004d] In another aspect, the present disclosure refers to the use of a low dose statin treatment in combination with an anti-PCSK9 neutralizing antibody in the manufacture of a pharmaceutical for treating coronary atherosclerosis, wherein treating coronary atherosclerosis comprises regression of coronary atherosclerosis, wherein the use comprises: a. that at least the low dose statin treatment is to be administered to a statin-intolerant subject; and b. that the amount of an anti-PCSK9 neutralizing antibody is to be administered to the subject, thereby treating coronary atherosclerosis; wherein the low dose statin treatment and the anti-PCSK9 neutralizing antibody are to be administered together or separately.

[0004e] In yet another aspect, the present disclosure refers to the use of a monoclonal antibody to human PCSK9 in the manufacture of a pharmaceutical for reducing an amount of atherosclerotic plaque in a subject, wherein the use comprises that the monoclonal antibody to human PCSK9 is to be administered to the subject having atherosclerotic plaque, wherein the subject is receiving optimized statin therapy, thereby reducing the amount of atherosclerotic plaque in the subject.

[0004f] In yet another aspect, the present disclosure refers to the use of evolocumab in combination with a statin therapy in the manufacture of a pharmaceutical for producing ~~greater~~ LDL-C lowering and regression of coronary atherosclerosis at a dose that is well tolerated, wherein the use comprises: that at least a moderate intensity of the statin therapy is to be administered to a subject; that an adequate amount of evolocumab is to be administered to the subject such that the subject's LDL-C levels drop to no more than 40 mg/dL; and that the subject's LDL-C levels is to be maintained at no more than 40 mg/dL for at least one year; wherein evolocumab and the statin therapy are to be administered together or separately.

[0004g] In yet another aspect, the present disclosure refers to the use of a PCSK9 inhibitor in the manufacture of a pharmaceutical for decreasing percent atheroma volume (PAV) in a subject, wherein the use comprises that the PCSK9 inhibitor is to be administered to a subject that has received at least a moderate level of treatment by a non-PCSK9 LDL-C lowering agent, in an amount sufficient and time sufficient to lower the LDL-C level to less than 90 mg/dL, thereby decreasing a percent atheroma volume (PAV) in the subject.

[0004h] In yet another aspect, the present disclosure refers to the use of a PCSK9 inhibitor in the manufacture of a pharmaceutical for decreasing total atheroma volume (TAV) in a subject, wherein the use comprises that the

PCSK9 inhibitor is to be administered to a subject that has received at least a moderate level of treatment by a non-PCSK9 LDL-C lowering agent, in an amount sufficient and time sufficient to lower the LDL-C level to less than 90 mg/dL, thereby decreasing a total atheroma volume in the subject.

[0004i] In yet another aspect, the present disclosure refers to the use of a PCSK9 inhibitor therapy in combination with a non-PCSK9 LDL-C lowering therapy in the manufacture of a pharmaceutical for producing ~~greater~~ LDL-C lowering and regression of coronary atherosclerosis at a dose that is well tolerated, wherein the use comprises: that at least a moderate intensity of the non-PCSK9 LDL-C lowering therapy is to be admininstered to a subject; that an adequate amount of the PCSK9 inhibitor is to be admininstered to the subject such that the subject's LDL-C levels drop to no more than 40 mg/dL; and that the subject's LDL-C levels is to be maintained at no more than 40 mg/dL for at least one year; wherein the PCSK9 inhibitor therapy and the non-PCSK9 LDL-C lowering therapy are to be administered together or separately.

[0005] In some examples, a method of treating coronary atherosclerosis is provided. The method comprises a) identifying a subject that is on a first therapy, wherein the first therapy comprises a non-PCSK9 LDL-C lowering therapy, and b) administering a second therapy to the subject. The second therapy comprises a PCSK9 inhibitor therapy. Both the first and second

WHAT IS CLAIMED IS:

1. Use of a PCSK9 inhibitor therapy in the manufacture of a pharmaceutical for treating coronary atherosclerosis, wherein the use comprises

   that a second therapy is to be administered to a subject that is on a first therapy, wherein the first therapy comprises a non-PCSK9 LDL-C lowering therapy, wherein the second therapy comprises the PCSK9 inhibitor therapy, wherein both the first and second therapies are to be administered to the subject in an amount and time sufficient to reverse coronary atherosclerosis in the subject, and wherein the first therapy is not the same as the second therapy.

2. Use of an anti-PCSK9 neutralizing antibody in the manufacture of a pharmaceutical for decreasing percent atheroma volume (PAV) in a subject, wherein the use comprises

   that the anti-PCSK9 neutralizing antibody is to be administered to a subject that has received at least a moderate level of treatment by a statin, in an amount sufficient and time sufficient to lower the LDL-C level to less than 90 mg/dL, thereby decreasing a percent atheroma volume (PAV) in the subject.

3. Use of an anti-PCSK9 neutralizing antibody in the manufacture of a pharmaceutical for decreasing total atheroma volume (TAV) in a subject, wherein the use comprises

   that the anti-PCSK9 neutralizing antibody is to be administered to a subject that has received at least a moderate level of treatment by a statin, in an amount sufficient and time sufficient to lower the LDL-C level to less than 90 mg/dL, thereby decreasing a total atheroma volume in the subject.

4. Use of a low dose statin treatment in combination with an anti-PCSK9 neutralizing antibody in the manufacture of a pharmaceutical for treating coronary atherosclerosis, wherein treating coronary atherosclerosis comprises regression of coronary atherosclerosis, wherein the use comprises:

   a. that at least the low dose statin treatment is to be administered to a statin-intolerant subject; and

b. that the amount of an anti-PCSK9 neutralizing antibody is to be administered to the subject, thereby treating coronary atherosclerosis; wherein the low dose statin treatment and the anti-PCSK9 neutralizing antibody are to be administered together or separately.

5. Use of a monoclonal antibody to human PCSK9 in the manufacture of a pharmaceutical for reducing an amount of atherosclerotic plaque in a subject, wherein the use comprises that the monoclonal antibody to human PCSK9 is to be administered to the subject having atherosclerotic plaque, wherein the subject is receiving optimized statin therapy, thereby reducing the amount of atherosclerotic plaque in the subject.

6. Use of evolocumab in combination with a statin therapy in the manufacture of a pharmaceutical for producing ~~greater~~ LDL-C lowering and regression of coronary atherosclerosis at a dose that is well tolerated, wherein the use comprises:

that at least a moderate intensity of the statin therapy is to be administered to a subject;

that an adequate amount of evolocumab is to be administered to the subject such that the subject's LDL-C levels drop to no more than 40 mg/dL; and

that the subject's LDL-C levels is to be maintained at no more than 40 mg/dL for at least one year; wherein evolocumab and the statin therapy are to be administered together or separately.

7. Use of a PCSK9 inhibitor in the manufacture of a pharmaceutical for decreasing percent atheroma volume (PAV) in a subject, wherein the use comprises

that the PCSK9 inhibitor is to be administered to a subject that has received at least a moderate level of treatment by a non-PCSK9 LDL-C lowering agent, in an amount sufficient and time sufficient to lower the LDL-C level to less than 90 mg/dL, thereby decreasing a percent atheroma volume (PAV) in the subject.

8. Use of a PCSK9 inhibitor in the manufacture of a pharmaceutical for decreasing total atheroma volume (TAV) in a subject, wherein the use comprises

that the PCSK9 inhibitor is to be administered to a subject that has received at least a moderate level of treatment by a non-PCSK9 LDL-C lowering agent, in an

amount sufficient and time sufficient to lower the LDL-C level to less than 90 mg/dL, thereby decreasing a total atheroma volume in the subject.

9. Use of a PCSK9 inhibitor therapy in combination with a non-PCSK9 LDL-C lowering therapy in the manufacture of a pharmaceutical for producing ~~greater~~ LDL-C lowering and regression of coronary atherosclerosis at a dose that is well tolerated, wherein the use comprises:

that at least a moderate intensity of the non-PCSK9 LDL-C lowering therapy is to be admininstered to a subject;

that an adequate amount of the PCSK9 inhibitor is to be admininstered to the subject such that the subject's LDL-C levels drop to no more than 40 mg/dL; and

that the subject's LDL-C levels is to be maintained at no more than 40 mg/dL for at least one year; wherein the PCSK9 inhibitor therapy and the non-PCSK9 LDL-C lowering therapy are to be administered together or separately.

10. The use of any one of claims 1 or 7-9 wherein the PCSK9 inhibitor or PCSK9 inhibitor therapy is selected from the group consisting of neutralizing antibodies to PCSK9 and RNAi to PCSK9.
11. The use of claim 10, wherein the neutralizing antibody to PCSK9 comprises evolocumab, alirocumab, bococizumab, REGN728, RG7652, LY3015014, LGT209, 1D05, or 1B20, or wherein the RNAi to PCSK9 comprises ALN-PCSc.
12. The use of any one of claims 1-5 or 7-9, wherein the PCSK9 inhibitor, or the PCSK9 inhibitor therapy, or the anti-PCSK9 neutralizing antibody, or the monoclonal antibody to human PCSK9, or the neutralizing antibody to PCSK9 comprises evolocumab, alirocumab, bococizumab, REGN728, RG7652, LY3015014, LGT209, 1D05, or 1B20.

13. The use of any of claims 1 or 7-12, wherein the non-PCSK9 LDL-C lowering therapy or agent is selected from the group consisting of a statin, a selective cholesterol absorption inhibitor, a lipid lowering therapy fibrate or fibric acid derivative, a resin, cholestyramine, cholestipol, colesevelan HCl, or a combination thereof