

**WHAT IS CLAIMED IS:**

1. A method of treating coronary atherosclerosis, the method comprising:
  - 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, wherein the second therapy comprises a PCSK9 inhibitor therapy, wherein both the first and second therapies are 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. A method of treating coronary atherosclerosis, the method comprising:
  - a. identifying a subject that has a LDL-C level of less than 70 mg/dL; and
  - b. administering an anti-PCSK9 neutralizing antibody to the subject, in an amount sufficient and time sufficient to lower the LDL-C level to less than 60 mg/dL.
3. A method of decreasing percent atheroma volume (PAV) in a subject, the method comprising:

identifying a subject that has received at least a moderate level of treatment by a statin; and

administering an anti-PCSK9 neutralizing antibody to the subject 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.
4. A method of decreasing total atheroma volume (TAV) in a subject, the method comprising:
  - a. identifying a subject that has received at least a moderate level of treatment by a statin; and
  - b. administering an anti-PCSK9 neutralizing antibody to the subject 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.

5. A method of treating coronary atherosclerosis, the method comprising:
  - a. identifying a statin-intolerant subject;
  - b. administering at least a low dose statin treatment to the statin-intolerant subject; and
  - c. administering an amount of an anti-PCSK9 neutralizing antibody to the subject, thereby treating coronary atherosclerosis.
6. A method of reducing an amount of atherosclerotic plaque in a subject, the method comprising administering to a subject having atherosclerotic plaque a monoclonal antibody to human PCSK9, wherein the subject is receiving optimized statin therapy, thereby reducing the amount of atherosclerotic plaque in the subject.
7. A method of combining evolocumab and a statin therapy to produce greater LDL-C lowering and regression of coronary atherosclerosis at a dose that is well tolerated, the method comprising:
  - administering at least a moderate intensity of a statin therapy to a subject;
  - administering an adequate amount of evolocumab to the subject such that the subject's LDL-C levels drop to no more than 40 mg/dL; and
  - maintaining the subject's LDL-C levels at no more than 40 mg/dL for at least one year.
8. A method of treating coronary atherosclerosis, the method comprising:
  - identifying a subject that has a LDL-C level of less than 70 mg/dL; and
  - administering a PCSK9 inhibitor to the subject, in an amount sufficient and time sufficient to lower the LDL-C level to less than 60 mg/dL.
9. A method of decreasing percent atheroma volume (PAV) in a subject, the method comprising:
  - identifying a subject that has received at least a moderate level of treatment by a non-PCSK9 LDL-C lowering agent; and
  - administering a PCSK9 inhibitor to the subject 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.
10. A method of decreasing total atheroma volume (TAV) in a subject, the method comprising:

identifying a subject that has received at least a moderate level of treatment by a non-PCSK9 LDL-C lowering agent; and

administering a PCSK9 inhibitor to the subject 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.

11. A method of reducing disease progression, the method comprising:

identifying a subject with a LDL-C level of no more than 60 mg/dL;

administering at least a moderate intensity of a non-PCSK9 LDL-C lowering therapy to the subject; and

administering a PCSK9 inhibitor at a level sufficient to decrease the LDL-C level of the subject to 30 mg/dL, thereby reducing disease progression.

12. A method of combining a PCSK9 inhibitor therapy and a non-PCSK9 LDL-C lowering therapy to produce greater LDL-C lowering and regression of coronary atherosclerosis at a dose that is well tolerated, the method comprising:

administering at least a moderate intensity of a non-PCSK9 LDL-C lowering therapy to a subject;

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

maintaining the subject's LDL-C levels at no more than 40 mg/dL for at least one year.

13. A method of reducing a risk of a cardiovascular event, the method comprising:

identifying a subject that is on a first therapy, wherein the first therapy comprises a non-PCSK9 LDL-C lowering therapy; and

administering a second therapy to the subject, wherein the second therapy comprises a PCSK9 inhibitor, wherein both the first and second therapies are administered to the subject in an amount and time sufficient to reduce a risk of a cardiovascular event in the subject, and wherein the first therapy is not the same as the second therapy, and wherein the risk is a) a composite for cardiovascular death, myocardial infarction, stroke, hospitalization for unstable angina, or coronary revascularization or b) a composite for cardiovascular death, myocardial infarction, or stroke.

14. A method of reducing a risk of a cardiovascular event, the method comprising:
  - identifying a subject that is on a first therapy, wherein the first therapy comprises a non-PCSK9 LDL-C lowering therapy; and
  - administering a second therapy to the subject, wherein the second therapy comprises a PCSK9 inhibitor, wherein both the first and second therapies are administered to the subject in an amount and time sufficient to reduce a risk of a cardiovascular event in the subject, and wherein the first therapy is not the same as the second therapy, and wherein the risk is the composite of fatal MI and/or non-fatal MI and fatal and/or non-fatal coronary revascularization.
15. A method of reducing a risk of a major adverse limb event ("MALE"), said method comprising:
  - administering a non-statin LDL-C lowering agent to a subject; and
  - administering a statin to the subject, wherein the subject has peripheral artery disease ("PAD").
16. A method of reducing a risk of a major cardiovascular adverse event ("MACE"), said method comprising:
  - administering a non-statin LDL-C lowering agent to a subject; and
  - administering a statin to the subject, wherein the subject has PAD.
17. A method of reducing a risk of a cardiovascular event, the method comprising:
  - providing a first therapy to a subject, wherein the first therapy comprises a non-PCSK9 LDL-C lowering therapy; and
  - providing a second therapy to the subject, wherein the second therapy comprises a PCSK9 inhibitor, wherein both the first and second therapies are administered to the subject, and wherein the subject has a Lp(a) level of 11.8 mg/dL to 50.
18. A method of reducing a risk of a major vascular event in a subject, the method comprising:
  - 1) identifying a subject that has at least one of: (a) a recent MI, (b) multiple prior MIs, or (c) multivessel disease;
  - 2) providing a first therapy to a subject, wherein the first therapy comprises a non-PCSK9 LDL-C lowering therapy; and

3) providing a second therapy to the subject, wherein the second therapy comprises a PCSK9 inhibitor,

thereby reducing a risk that the subject will have a major vascular event.

19. A method of reducing a risk of a cardiovascular event, comprising administering, to a subject that has a LDL-C level of greater than 70 mg/dL, a PCSK9 inhibitor in an amount sufficient and time sufficient to lower the LDL-C level to less than 40 mg/dL.