

# Hyperlipidemia

Unmet needs

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# Conflict of interest:

- Nothing to declare.



# History

- 35 year-old Saudi male presented for CAD follow up
- **Past History**
  - Smoker, No DM or HTN.
  - Family history of premature CAD.
- **Physical Exam**
  - Arcus Cornealis
  - Otherwise unremarkable physical examination



# 5 years ago

- Chest pain, ECG changes, Troponin leak.
- Cath 3VD
- CABG 4 sites 2011



# Lab results prior to CABG:

- Hb: 16 gm/dL
- Creatinine: 70 mmol/L
- F. B. Sugar: 4.9 mmol/L
- HbA1c: 5%
- TSH: 1.4

	mmol/L	mg/dL
Total Cholesterol	6.80	263
LDL-C	5.89	228
HDL-C	0.58	22
Triglyceride	1.34	118



# Does this patient has Familial Hypercholesterolemia?

- A. Definite
- B. Possible
- C. Probable
- D. I don't know



## Dx of FH: Dutch Lipid Clinic Network Criteria

1. LDL-C	Points
>325	8
251-325	5
191-250	3
155-190	1

2. Phys exam	Points
Tendon xanthoma	6
Corneal arcus age <45	4

3. 1 <sup>st</sup> deg relative	Points
Early CHD	1
High LDL-C	1-2
Xanth, arcus	2

4. ASCVD	Points
Early CHD	2
Early CerVD or PAD	1
5. Mutational analysis	8

Definite > 8, Probable 6-8, Possible 3-5, Unlikely <3



# What is the target LDL-C?

- A. < 130 mg/dl
- B. < 100 mg/dl
- C. < 70 mg/dl
- D. > 50% reduction from the baseline level.





# What dose of Atorvastatin?

- A. 10 mg PO once daily.
- B. 20 mg PO once daily.
- C. 40 mg PO once Daily.
- D. 80 mg PO once daily.



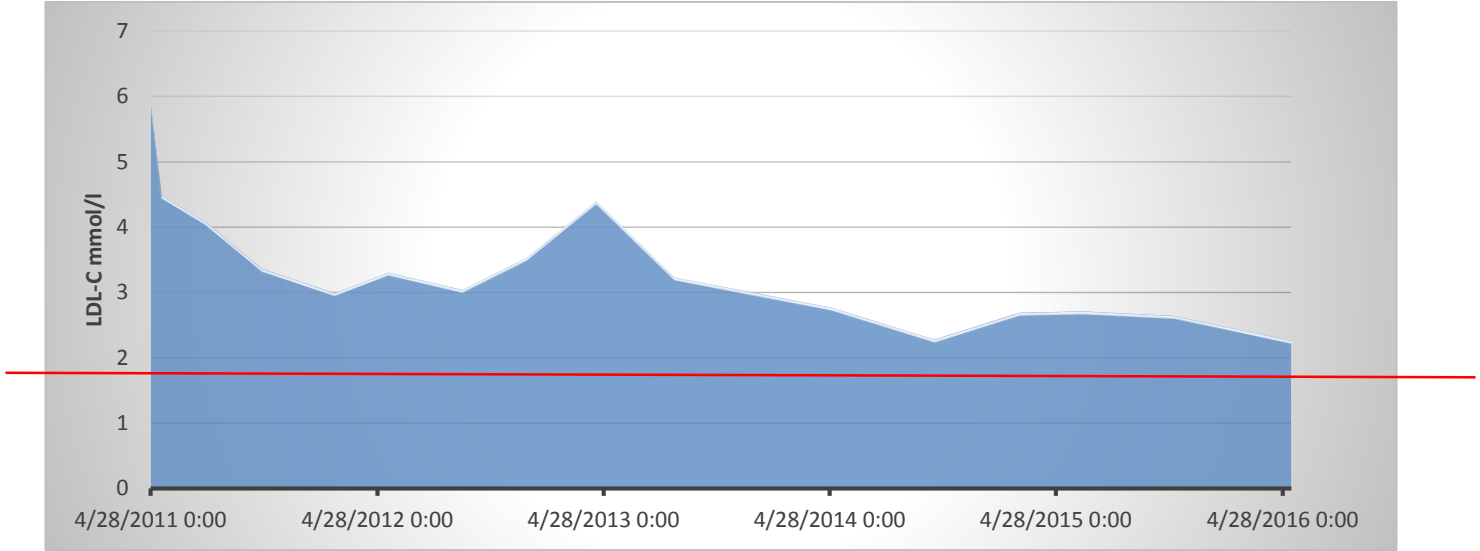
# F/U after 3 months of high intensity statin therapy LDL-C 130 mg/dl (3.36 mmol/l)

- What medication should be added?
  - A. Niacin
  - B. Ezetimibe 10 mg
  - C. Cholestyramine
  - D. Switch to Simvastatin 80mg/Ezetimibe 10mg



- Ezetimibe 10 mg PO once daily was added.
- During the F/U for the last 5years Atorvastatin was changed to Rosuvastatin 40 mg
- Patient remains clinically stable.



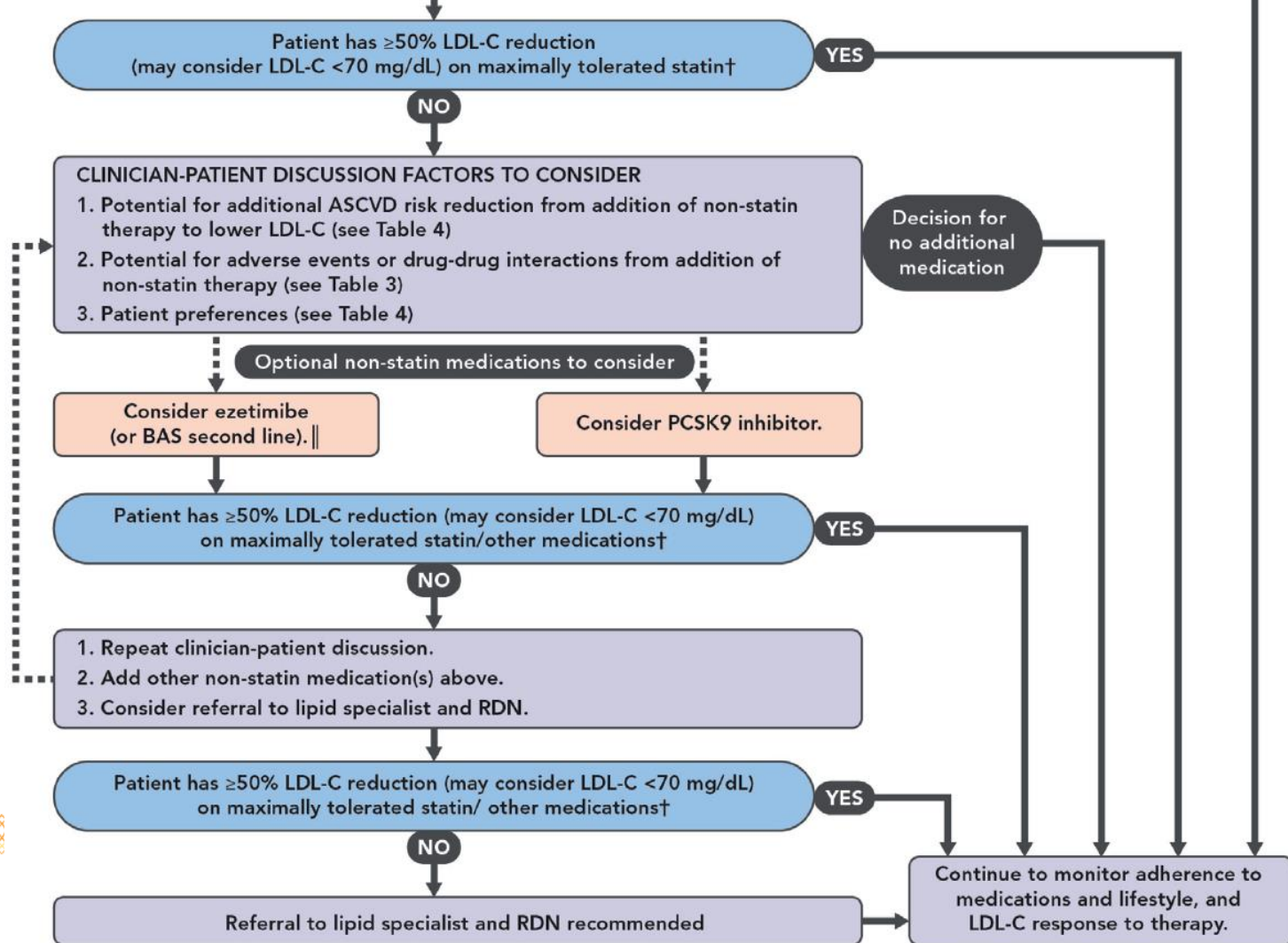


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# Last visit May 2016:

- Rosuvastatin 40 mg and Ezetimibe 10 mg.
- LDL-C: 87 mg/dl (2.26 mmol/l) (62% of the baseline in 2011)
- Do you accept this level of control?
- What about adding a new lipid lowering agent?





## 2. Clinical ASCVD with Co-morbidities:

DM, Recent acute ASCVD event, ASCVD event on statin, Baseline LDL-C  $\geq 190$  mg/dL, Uncontrolled risk factors, Elevated Lp(a), CKD

- Treat with maximal tolerated statin
- Achieve at least  $\geq 50\%$  LDL-C reduction
- If this reduction is not achieved, initiate patient clinician discussion and consider non statins if LDL-C  $\geq 70$  mg/dL, or non-HDL-C  $\geq 100$  if diabetic
- Ezeimibe first
- PCSK9 inhibitor next
- If treatment objective achieved, follow lipids
- If not, reassess medication adherence and lifestyle
- Mipomersen, lomitapide and/or LDL apheresis in appropriate patients



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# Thank you



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