ENHANCING THE VALUE OF

PCSK9 Monoclonal Antibodies (mAb) by Identifying Patients Most Likely to Benefit

NATIONAL LIPID ASSOCIATION

PCSK9 mAb may provide value if LDL-C remains ≥100 mg/dl despite maximally tolerated statin and ezetimibe therapy in patients at very high or extremely high atherosclerotic cardiovascular disease (ASCVD) risk.

SYSTEMATIC REVIEW → Clinical Trial Data

VALUE

5-year Number Needed to Treat (NNT):

Discount	Price	Value
21-28 (NNT)		
(≈) 60%	≈ $5,400/Year	$100,000/QALY *(Reasonable Value)*

Cost per Quality Adjusted Life Year (QALY)

Approximate Reduced Cost*
≈$5,400/YEAR

Patients with heterozygous familial hypercholesterolemia (HeFH) or severe hypercholesterolemia (SH)

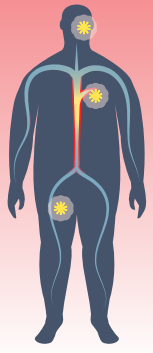
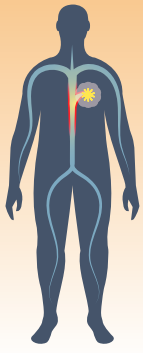
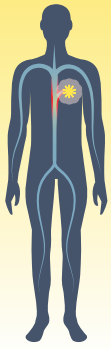
On Maximally Tolerated Statin & Ezetimibe Therapy		
	High Value *<$50,000/QALY*	Reasonable Value *<$100,000/QALY*
5-year NNT	≤14	≤28
Secondary Prevention		
HeFH or SH >220 mg/dl with clinical ASCVD *(ASCVD risk likely similar when coronary artery calcium >100 Agatston units)*	LDL-C ≥100 mg/dl	LDL-C ≥70 mg/dl
Primary Prevention		
HeFH or SH >220 mg/dl *with risk factor(s)**	LDL-C ≥190 mg/dl	LDL-C ≥100 mg/dl

Patients with ASCVD on Maximally Tolerated Statin +/- Ezetimibe Therapy

	High Value *<$50,000/QALY*	Reasonable Value *<$100,000/QALY*
5-year NNT	≤10	≤21
10-year ASCVD risk		
≥40%	LDL-C >130 mg/dl	LDL-C ≥70 mg/dl
30-39%	LDL-C ≥190 mg/dl	LDL-C >100 mg/dl
20-29%	N/A	LDL-C ≥130 mg/dl

High, Very High and Extremely High-Risk Patients

On Maximally Tolerated Statin +/- Ezetimibe

Extreme High Risk *>40% 10y ASCVD risk*	Very High Risk *30-39% 10y ASCVD risk*	High Risk *20-29% 10y ASCVD risk*
		
LDL-C ≥70 mg/dl	**LDL-C ≥100 mg/dl**	**LDL-C ≥130 mg/dl**
• Extensive or active burden of ASCVD, usually with extremely high risk and poorly controlled cardiometabolic risk factors. • Less extensive ASCVD and extremely high risk cardiometabolic risk factors	• Less extensive ASCVD and poorly controlled cardiometabolic risk factors	• Less extensive ASCVD and well controlled cardiometabolic risk factors • Primary prevention HeFH or SH LDL-C>220 mg/dl and poorly controlled cardiometabolic risk factors

Robinson, Jennifer G., et al. "Enhancing the Value of PCSK9 Monoclonal Antibodies by Identifying Patients Most Likely to Benefit." Journal of Clinical Lipidology, 16 May 2019, doi:10.1016/j.jacl.2019.05.005.