

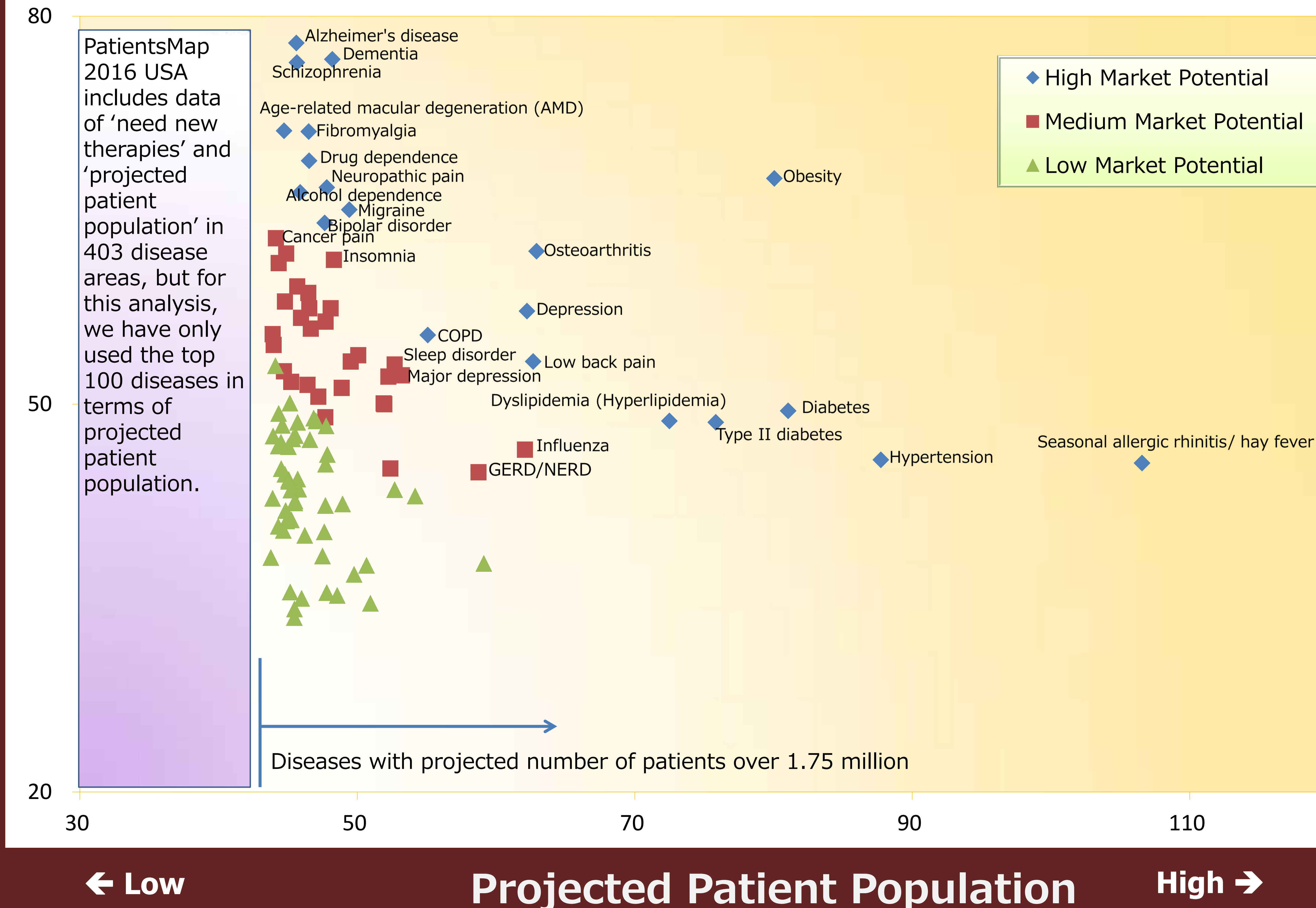
In order to understand the need for new product development, it is important to understand the unmet needs of the relative disease areas. To determine which of the relative disease areas have the highest needs, should we also consider the patient population?

In order to examine this, we have referenced a large-scale US physician survey data (PatientsMap 2016, with n=5034), which include data on 'physicians' perceptions on the need for new therapies' (Y-axis) and 'projected patient population' (X-axis).

Below scatter plot shows each of the Y-axis (need new therapies) and X-axis (projected patient population) using a standard score with a mean score of 50 and standard deviation of 10.

If we are to define the plotted points of 'need new therapies' and 'projected patient population' as the level of "market potential for new therapies", we can categorize each disease area into "blue - high market potential", "red - medium market potential" and "green - low market potential" as below.

■ The market potential for new therapies in top 100 diseases



■ Ranking of the market potential for new therapies (top 50)

Group	Disease areas	'Need new therapies' index	'Projected patient population' index	Market Potential index
High Market Potential	Obesity	67.5	80.1	5,400.6
	Seasonal allergic rhinitis/ hay fever (in the last year)	45.4	106.6	4,842.3
	Diabetes	49.5	81.1	4,011.0
	Hypertension	45.7	87.7	4,008.6
	Osteoarthritis	61.8	62.9	3,889.9
	Dementia	76.7	48.2	3,695.5
	Type II diabetes	48.6	75.8	3,684.9
	Depression	57.2	62.2	3,559.6
	Alzheimer's disease	77.9	45.6	3,553.9
	Dyslipidemia (Hyperlipidemia)	48.7	72.5	3,530.3
	Schizophrenia	76.4	45.7	3,488.4
	Low back pain	53.3	62.7	3,340.4
	Fibromyalgia	71.1	46.5	3,304.9
	Migraine	65.0	49.4	3,214.3
	Drug dependence	68.8	46.5	3,202.1
Medium Market Potential	Neuropathic pain	66.8	47.8	3,190.7
	Age-related macular degeneration (AMD)	71.1	44.7	3,181.7
	Bipolar disorder	64.0	47.7	3,050.2
	COPD	55.3	55.1	3,048.1
	Alcohol dependence	66.4	45.9	3,045.4
	Insomnia	61.2	48.3	2,955.4
	Influenza (in the last year)	46.5	62.1	2,885.8
	Sleep disorder	53.1	52.7	2,796.4
	Major depression	52.2	53.2	2,780.2
	Cancer pain	62.8	44.1	2,772.7
	Diabetic retinopathy	61.6	44.9	2,766.4
	Diabetic neuropathic pain	57.4	48.1	2,760.2
	Knee osteoarthritis	52.1	52.2	2,723.1
	Menopausal symptoms	58.6	46.5	2,723.1
	Mild cognitive impairment (MCI)	60.9	44.3	2,700.5
Glaucoma	59.1	45.7	2,699.2	
Diabetic neuropathy	53.8	50.1	2,692.2	
Atopic dermatitis	56.4	47.7	2,689.6	
Dry eye	57.4	46.5	2,671.4	
Attention deficit hyperactivity disorder (ADHD)	53.3	49.5	2,639.0	
Gastroesophageal reflux disease (GERD)/Nonerosive reflux disease (NERD)	44.7	58.7	2,627.9	
Irritable bowel syndrome (IBS)	55.8	46.6	2,604.6	
Sepsis	56.7	45.9	2,603.7	
Perennial allergic rhinitis	50.0	52.0	2,597.9	
Congestive heart failure	50.1	51.9	2,597.6	
Rheumatoid arthritis	57.9	44.8	2,594.8	
Osteoporosis	51.2	48.9	2,504.3	
Uterine fibroids	55.4	43.9	2,432.5	
Cerebral infarction	54.6	44.0	2,399.9	
Lumbar spinal stenosis	51.5	46.4	2,389.0	
Diabetic nephropathy	50.6	47.2	2,386.8	
Bronchial asthma	45.0	52.4	2,358.0	
Adult ADHD	52.5	44.7	2,349.2	
Overactive bladder (OAB)	51.7	45.2	2,339.7	
Lumbar disc herniation	49.0	47.7	2,337.1	