

# THE COST OF PSORIASIS THERAPY

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# PSORIASIS EPIDEMIOLOGY

## JAAD 53:573, 2005

- Prevalence
  - ◆ Psoriasis ~2%
  - ◆ Psoriatic arthritis ~0.2%
- 1.5 million seek physician care
- Total cost \$1.6 - \$3.2 billion
- Average \$1400 - \$6600 per patient

# PROSPECTIVE STUDY COST OF PSORIASIS IN SPAIN JEADV 20:840, 2006

- One year study - 800 patients
- \$1097 euro / patient
- ~50% was the cost of medication
- Moderate to severe patients 2.5X as compared to mild disease

# PSORIASIS

- Per patient annual health costs more than double matched sample without the disease
- Presence of multiple comorbid conditions including depression, diabetes, and obesity
- Conditions related to toxicity of therapy

# THERAPY ACCESS

- Prior authorization for biologic therapy
- Significant geographic variation
- BC of California
  - ◆ Failure of phototherapy and 2 systemic agents / 30% body surface area
- Phototherapy
  - ◆ Co-payment issues

# CLASSIFYING AND MEASURING PSORIASIS

- Mild, moderate, severe??
- 3%, 5%, 10%, 30%
- BSA (Body surface area), PGA (Physician global assessment), PASI
  
- Treatable topically
- Needs systemic approach

# UK BIOLOGIC GUIDELINES

Brit J Derm 153:486, 2005

- Severity of disease - Rule of tens
  - ◆ BSA >10%
  - ◆ PASI >10
  - ◆ DLQI >10
- Must fulfill certain clinical criteria

# CLINICAL CRITERIA

- Fail to respond to conventional therapy
- Side effects with conventional therapy
- Unstable disease
- Other significant co-morbidities
- Psoriatic arthritis fulfilling rheumatology society criteria

# PSORIASIS THERAPY

Needs systemic therapy



## Traditional Systemic Agents

- Methotrexate
- Cyclosporine
- Acitretin
- Other immunosuppressants

## Phototherapy

- UVB
- PUVA

## Biologic Agents

- Adalimumab
- Alefacept
- Efalizumab
- Etanercept
- Infliximab

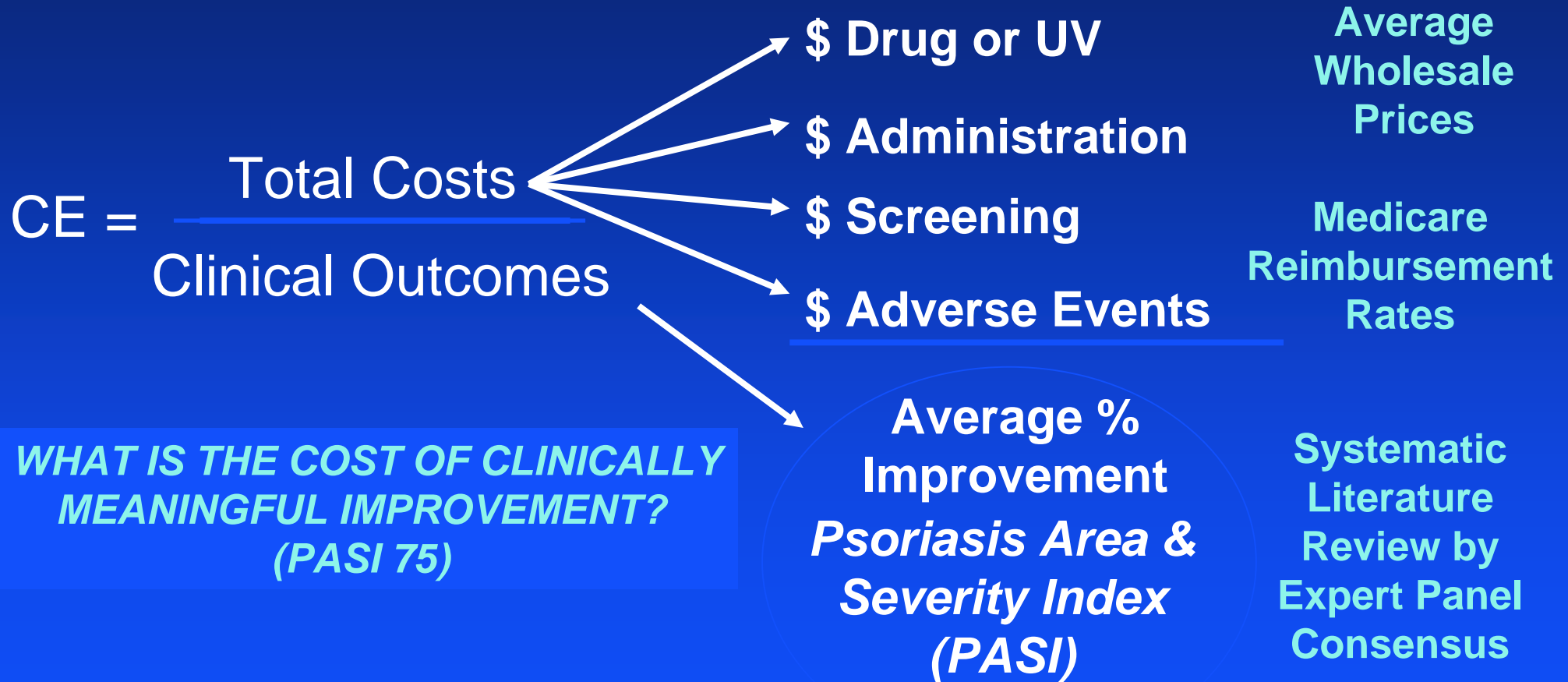
# ANNUAL COST AWP 6/2006

■ Alefacept (two courses)	\$23,880
■ Efalizumab (<125 kg)	\$21,041
■ Etanercept 50mg / week	\$20,869
■ Etanercept Step down	\$25,685
■ Infliximab (61-80 kg)	\$17,947
■ Infliximab (81-100 kg)	\$23,434
■ Adalimumab 40mg QOW	\$19,496

# COST COMPARISON OF TREATMENTS OF MODERATE TO SEVERE PSORIASIS

- Drug Benefit Trends 17:200, 2005
- Exp Opinion Pharmacother 7:152, 2006
- J Dermatol Treat 17:29, 2006

# METHODS



# ANNUAL ASSUMPTIONS IN TREATMENT PARADIGMS

Modality	Dosage	Visits	Lab Work	Other Cost
Methotrexate	15 mg Q wk	8 R3s	8 LFTs, CDPs	Biopsy every 2 y
Cyclosporine	240 mg QD	8 R3s	8 CMPs, CDPs, mg, lipids	None
Etanercept	25 mg twice a wk	8 R3s	1PPD	None
Infliximab	400 mg x 6 infusions	6 R3s	1 PPD	1 CXR, 6 infusions
Alefacept	18 injections	6 R3s	18 CD4 counts	12 nursing visits
UVB	30 treatments	4 R3s	None	26 nursing visits

# COST ESTIMATES: MEDICARE REIMBURSEMENT LEVELS

Item	Cost		
Level 3 return	\$47	T cell CD4 count	\$89
Nursing	\$19	Tuberculosis PPD	\$9
Complete blood count w/ diff	\$15	Chest x-ray	\$31
Lipid panel	\$19	Liver biopsy	\$650
Complete metabolic profile	\$20	1 hour IV infusion	\$40
Magnesium	\$13	>1 hour infusion, per hour	\$19
		UVB	\$47

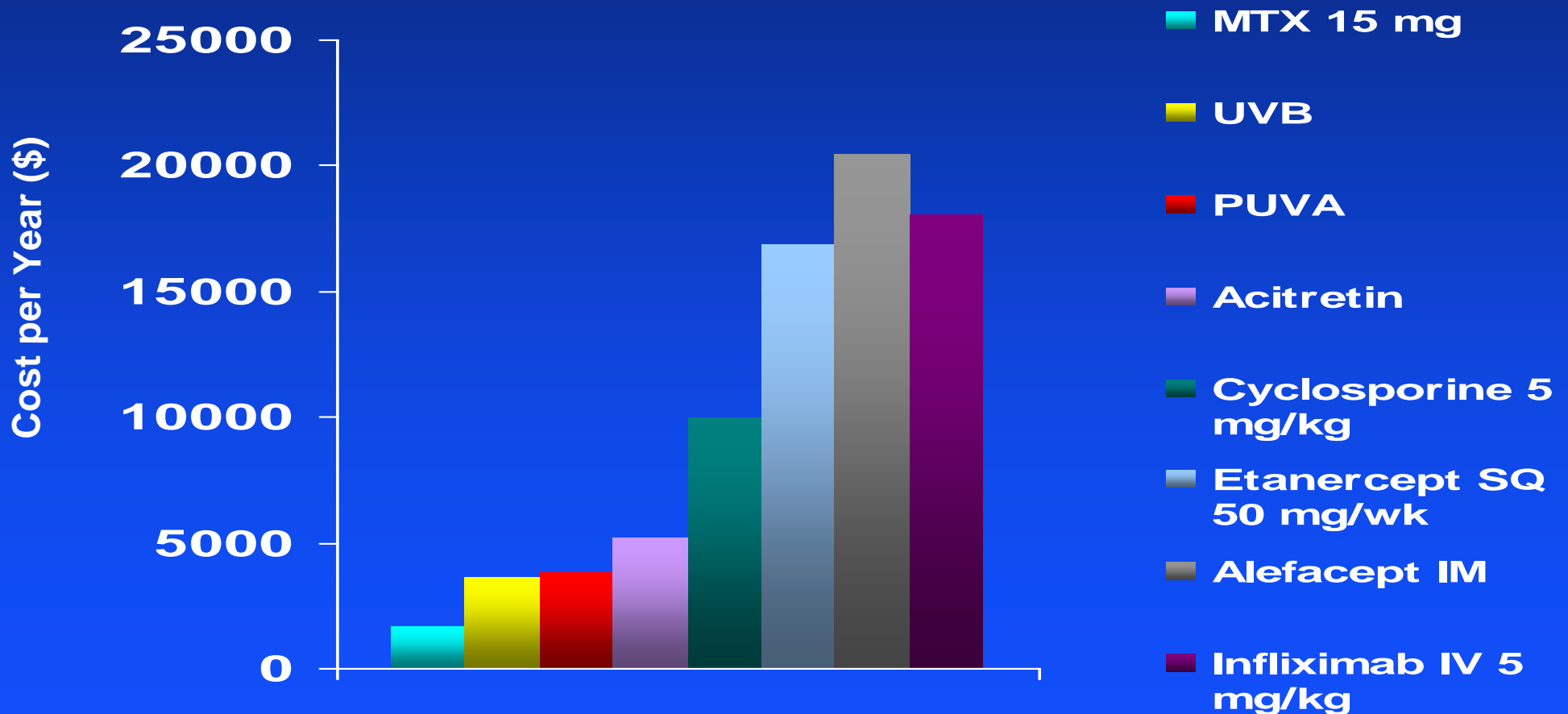
# COST ESTIMATES: WHOLESALE

Modality	AWP
Methotrexate 15 mg	\$0.51 per mg
Acitretin	\$0.49 per mg
Cyclosporine 3 mg/kg	\$0.06 per mg
Etanercept SQ	\$6.23 per mg
Infliximab 5 mg/kg	\$6.91 per mg
Alefacept 15 mg IM	\$67.67 per mg

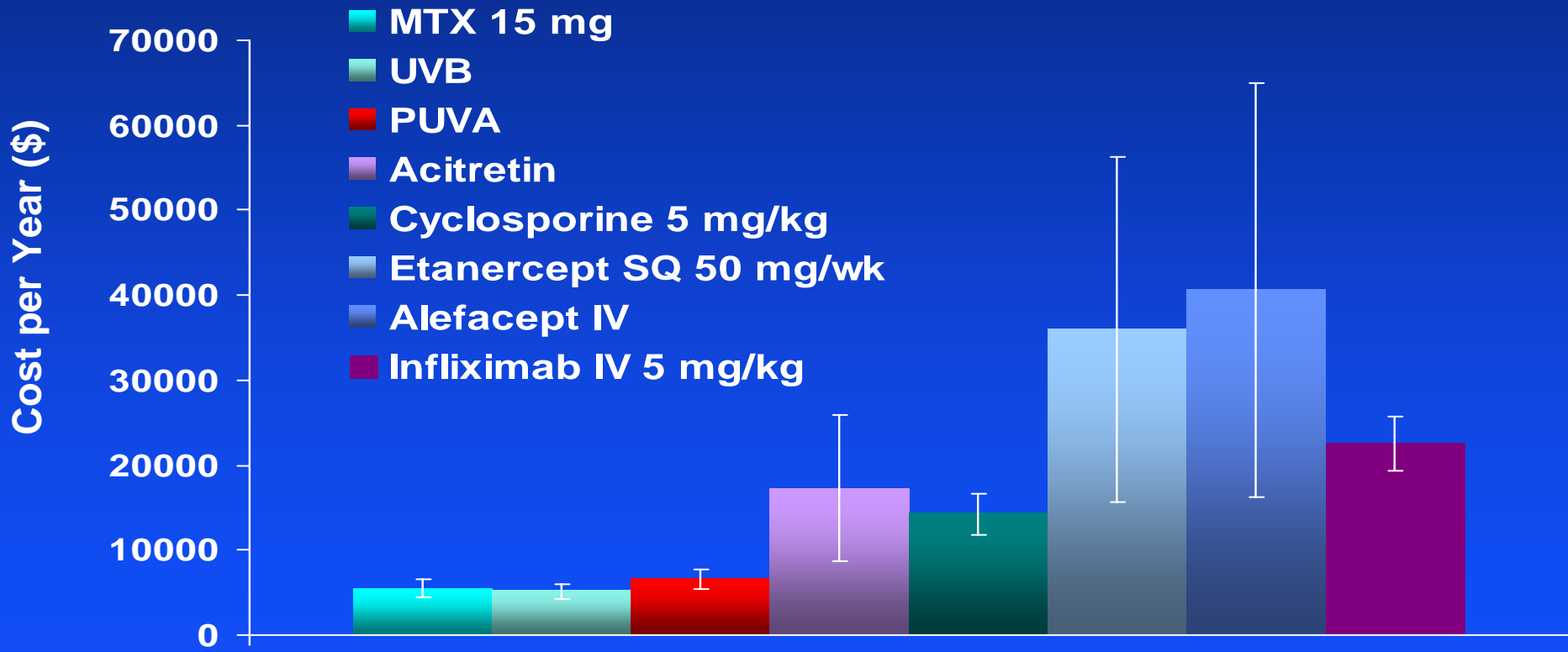
# EFFICACY ESTIMATES

Modality	Efficacy
UVB phototherapy	70%
Methotrexate	30%
Cyclosporine	70%
Biologic Therapy	
Alefacept	40%
Etanercept	47%
Infliximab	80%

# ANNUAL COST OF TREATMENT



# ANNUAL COST PER SUCCESS

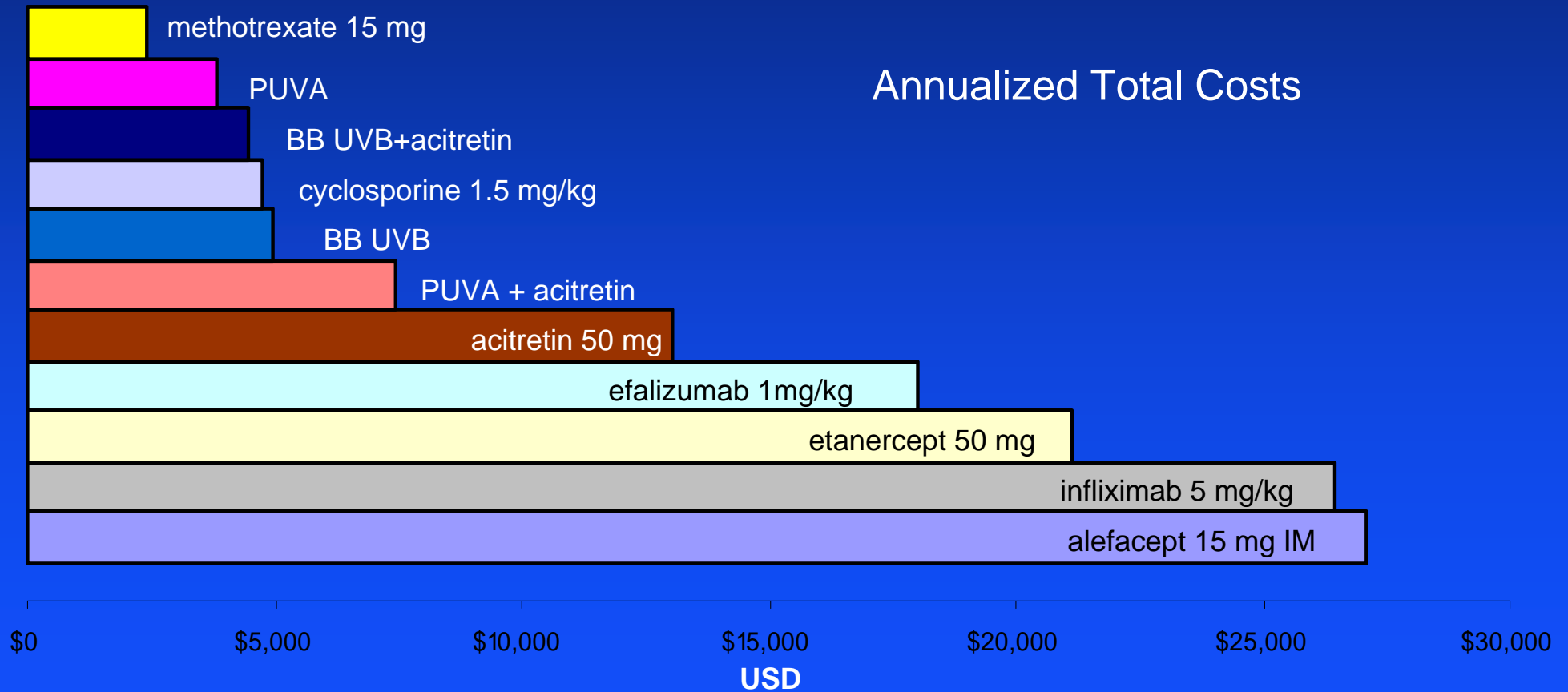


# SYSTEMATIC LITERATURE REVIEW RESULTS

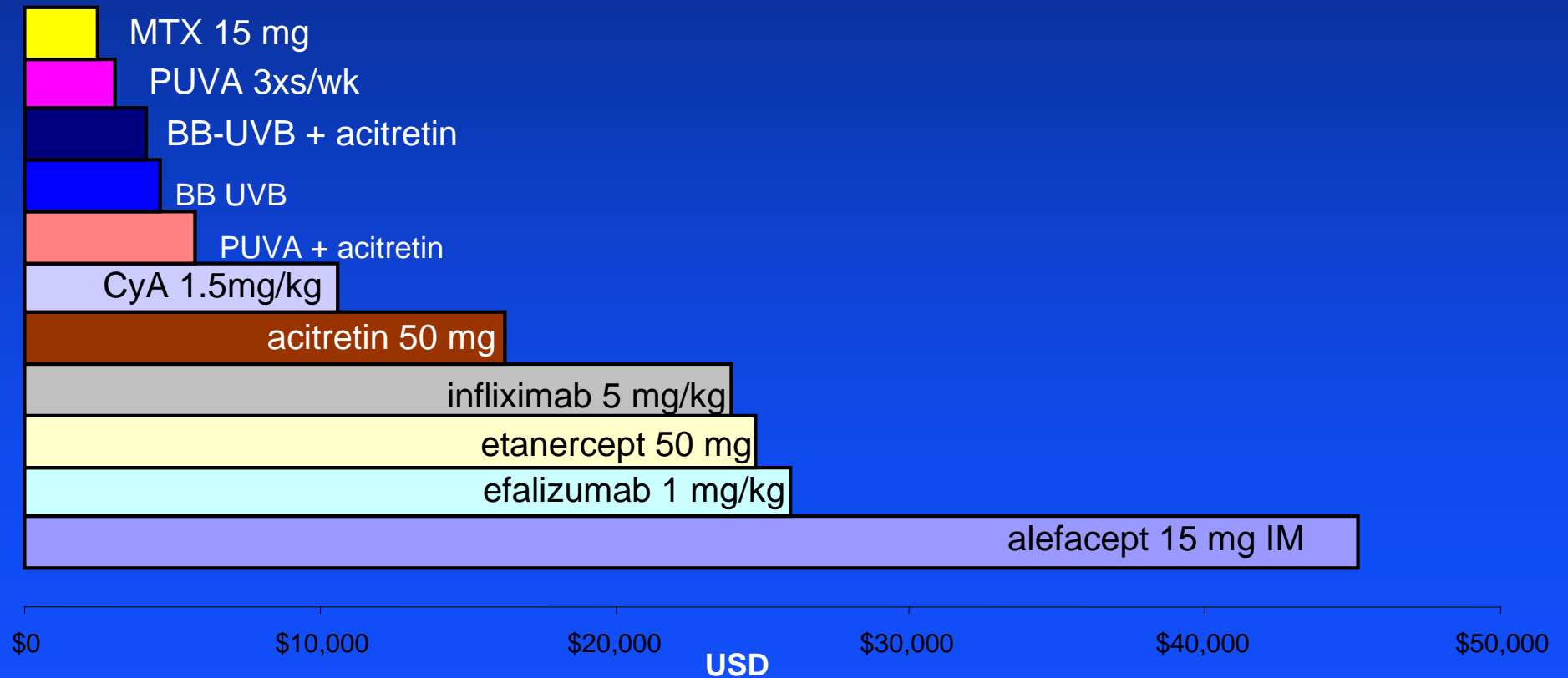
Treatment	Dose	PASI%
Broadband UVB	3 exp/wk	47%, 80.1%, 83.7%
Narrowband UVB	3 exp/wk	73.0%
PUVA	3 exp/wk	61.1%, 92.9%
acitretin	48.2 mg/day	60.4%
cyclosporine	1.5 mg/kg/day	33.4%
	3 mg/kg/day	52.0%
methotrexate	7.5 mg/wk	58.4%
	15 mg/wk	71.6%
alefacept	15 mg/wk 2-12wk courses	45.0%
efalizumab	1 mg/kg/wk	51%, 52.0%
etanercept	50 mg 2xs weekly	64.2%
infliximab	5 mg/kg wks 0, 2, 6	82.8%
UVB + acitretin	5- 7 exp/wk + 25 mg/d	80.7 %
PUVA + acitretin	3 exp/wk + 20mg	97.3%

# ANNUALIZED TOTAL COSTS (USD)

(\$ RX/TX + \$ ADMIN + \$ SCREEN + \$ AE)



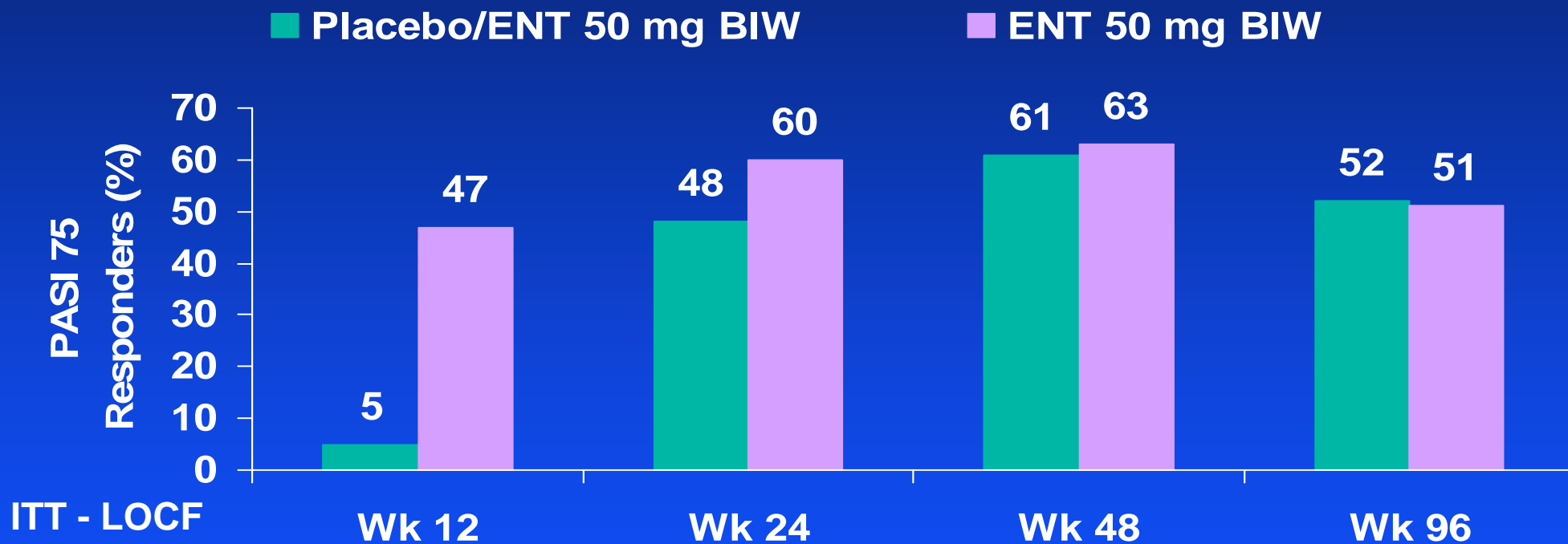
# ANNUALIZED COSTS TO ACHIEVE 75% PASI IMPROVEMENT (USD)



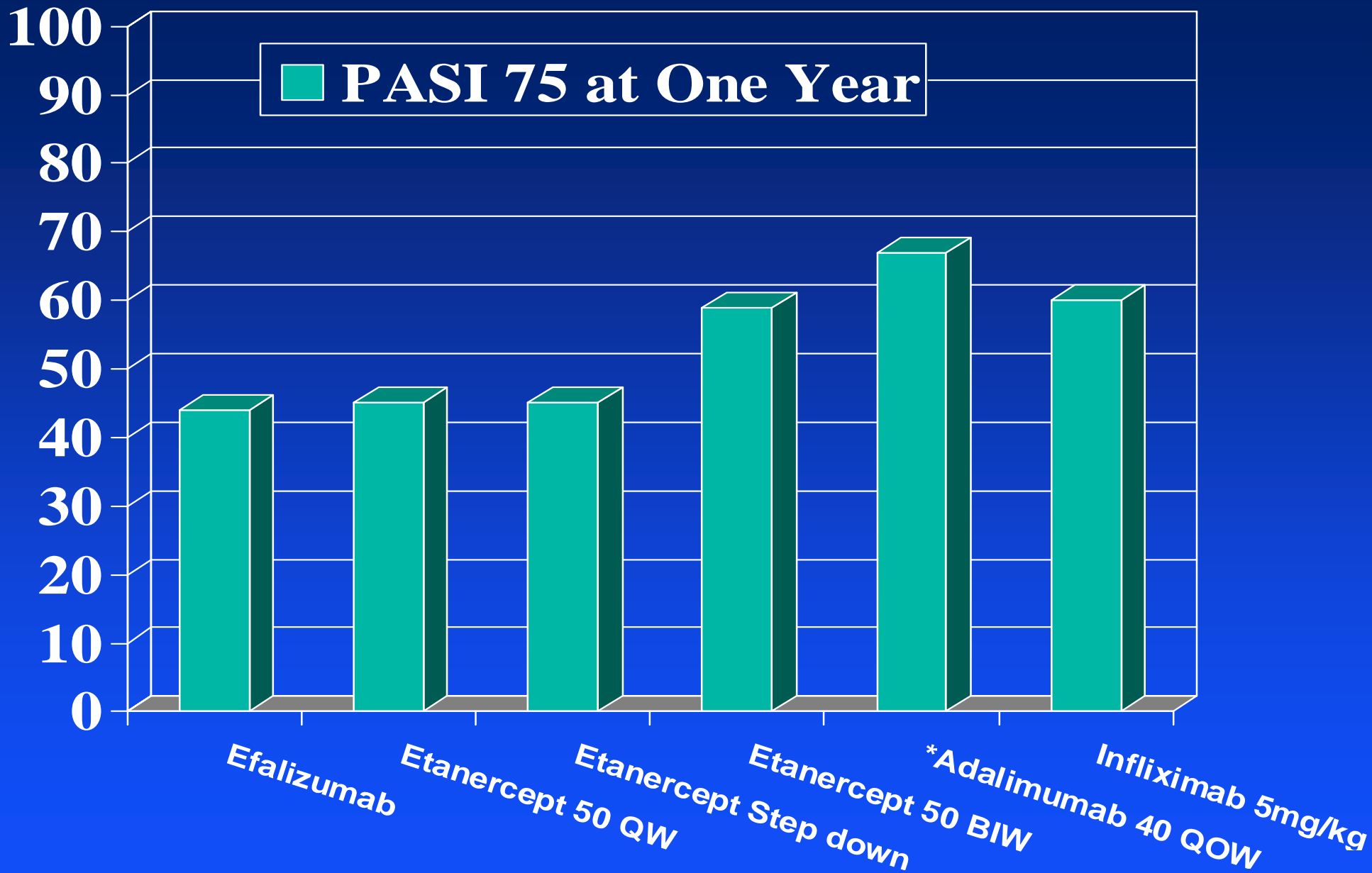
# INSURANCE PAYORS / PBM's

- Want information regarding cost efficacy
- Systemic treatment options are burgeoning
- Head-to-head efficacy comparisons are lacking
- Study assumptions over 1 year
  - ◆ PASI data over 12 weeks

# ETANERCEPT 50 MG BIW: PASI 75 RESPONSE RATES THROUGH WK 96



591 pts received  $\geq 1$  dose of open-label drug and 464 (78.5%) completed 84 wk of the extension.



# CONCLUSIONS

- Costs of medication and efficacy rates are the primary drivers cost-effectiveness
- Biologics do not appear to be as cost-effective as oral systemics, phototherapy, or combined phototherapy with acitretin

# THERAPEUTIC DECISION TREE

- Which agent?
- Are the biologics clearly a better choice than well established, less expensive agents with which we have decades of positive experience?
- Do physicians have a fiduciary responsibility to society?

# THANK YOU

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