

70 ANNI DI REUMATOLOGIA ALLE MOLINETTE

**Starhotels Majestic,
corso Vittorio Emanuele II 54, Torino**

11-12 ottobre 2019

Aspetti terapeutici delle Spondiloartriti

**Dr Fabrizio Cantini
UOC Reumatologia - Prato**

Dichiarazione conflitto d'interessi

- Nel corso degli ultimi 2 anni ricevuti compensi per attività di consulente ad Advisory Boards o per attività di relatore ad eventi scientifici dalle seguenti aziende:
- -Roche
- -MSD
- -Pfizer
- -UCB
- -Abbvie
- -Novartis
- -Janssen






Attività regolarmente autorizzate dalla Amministrazione di appartenenza ai sensi dell'art.53, comma 6, del D.Lgs. n. 165/2001

SpA: licensed therapies

- ▶ NSAIDs
- ▶ SSZ, MTX
- ▶ Anti-TNFs
- ▶ Anti-IL17

SPECIAL ARTICLE

2019 Update of the American College of Rheumatology/ Spondylitis Association of America/Spondyloarthritis Research and Treatment Network Recommendations for the Treatment of Ankylosing Spondylitis and Nonradiographic Axial Spondyloarthritis

Michael M. Ward,¹ Atul Deodhar,² Lianne S. Gensler,³ Maureen Dubreuil,⁴  David Yu,⁵
Muhammad Asim Khan,⁶ Nigil Haroon,⁷  David Borenstein,⁸ Runsheng Wang,⁹  Ann Biehl,¹ Meika A. Fang,¹⁰
Grant Louie,¹¹ Vikas Majithia,¹²  Bernard Ng,¹³ Rosemary Bigham,¹⁴ Michael Pianin,¹⁵ Amit Aakash Shah,¹⁶
Nancy Sullivan,¹⁷ Marat Turgunbaev,¹⁶ Jeff Oristaglio,¹⁷ Amy Turner,¹⁶ Walter P. Maksymowych,¹⁸ and
Liron Caplan¹⁹ 

1. We strongly recommend treatment with NSAIDs over no treatment with NSAIDs.†	Low	2
2. We conditionally recommend continuous treatment with NSAIDs over on-demand treatment with NSAIDs.	Low to moderate	1
3. We do not recommend any particular NSAID as the preferred choice.†	Low to moderate	3
6. In adults with active AS despite treatment with NSAIDs, we strongly recommend treatment with TNFi over no treatment with TNFi.	High	6
7. We do not recommend any particular TNFi as the preferred choice.	Moderate	5
11. In adults with active AS despite treatment with NSAIDs and who have contraindications to TNFi, we conditionally recommend treatment with secukinumab or ixekizumab over treatment with sulfasalazine, methotrexate, or tofacitinib.	Low	8
12. In adults with active AS despite treatment with the first TNFi used, we conditionally recommend treatment with secukinumab or ixekizumab over treatment with a different TNFi in patients with primary nonresponse to TNFi.	Very low	10

Terapie di seconda linea approvate per la PsA e SpA

Anti-TNFs

Adalimumab
40 mg/biweekly/sc

Bio-Infliximab
Bio-Etanercept
Bio-Adalimumab

PsA

Certolizumab
Loading dose
400 mg
200 mg/biweekly/sc

Infliximab
5 mg/Kg/8 weeks

Etanercept
50 mg/weekly/sc

Golimumab
50 mg/monthly/sc

Non anti-TNFs

Ustekinumab
90mg/sc/12/we
PsA

Secukinumab
90mg/sc/12/we
PsA-AS

**Small
molecule**
Apremilast
PsA

Ixekizumab
80 mg/sc/2-4
we
PsA-AS

A breve:
Guselkumab
Tofacitinib,etc.

Axial-SpA

Anti-TNF choice: efficacy and safety

- ▶ Anti-TNF efficacy in up to 70% of AS patients
- ▶ Absence of head to head trials comparing the efficacy
- ▶ Head to head trial IFX vs bio-IFX: no differences in efficacy in AS (Park W, et al. Ann Rheum Dis 2013)
- ▶ Efficacy of ADA, ETN, IFX, bio-IFX, GOL, and CTP for the treatment of AS, and non-rx-Ax SpA has been evaluated by indirect comparison in several systematic reviews and meta-analyses: no significant differences with a trend toward a better efficacy of IFX and bio-IFX (McLeod C, et al. Health Technol Assess. 2007; Migliore A, et al. J Med Econ. 2012; Shu T, et al. Clin Exp Rheumatol 2013; Baji P, et al. Eur J Health Econ 2014; Migliora A, et al. Clin Drug Investig 2015; Singh JA, et al. Cochrane Database Syst Rev. 2011; Maxwell LJ, et al. Cochrane Database Syst Rev. 2015)
- ▶ **Safety:** no significant differences have been observed among anti-TNF drugs, though a trend toward a better safety profile of ETN in terms of infection and TB risk (Ramiro S, et al. Ann Rheum Dis 2014; Cantini F, et al. Autoimmun Rev 2015)

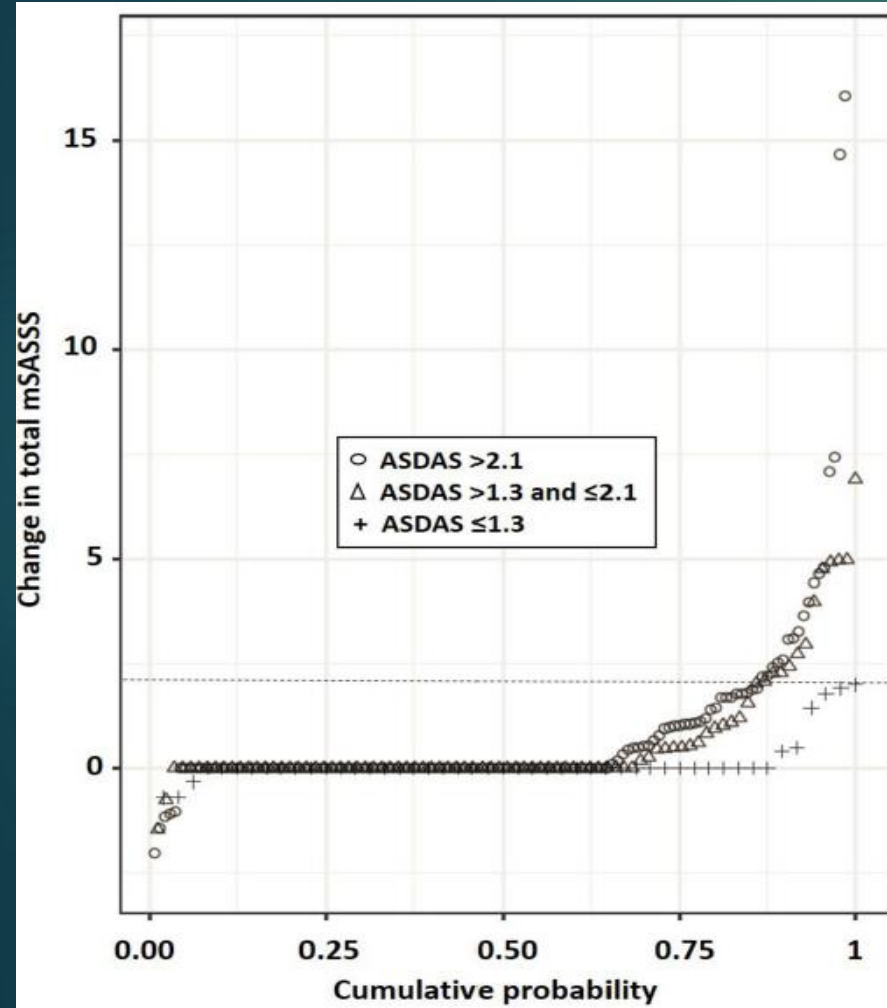
Biologici anti-TNF

Farmaco	Target	Posologia	Indicazioni
Adalimumab	TNF α	40 mg/sc/2 sett.	AR, AP, SA
<u>Adalimumab biosimil.</u>	TNF α	40 mg/sc/2 sett.	AR, AP, SA
Certolizumab	TNF α	200 mg/sc/2 sett.	AR (AP, SA)
Etanercept	TNF α	50 mg/sc/sett.	AR, AP, SA
<u>Etanercept biosimil.</u>	TNF α	50 mg/sc/sett.	AR, AP, SA
Golimumab	TNF α	50 mg/sc/mese	AR, AP, SA
Infliximab	TNF α	3-5 mg/Kg/ev/8 sett.	AR, AP, SA
<u>Infliximab biosimil.</u>	TNF α	3-5 mg/Kg/ev/8 sett.	AR, AP, SA

- Efficacia nel 60-70% dei pazienti con SpA, AP
- Anti-TNF monoclonali efficaci sulle manifestazioni extra-articolari della SpA
- Rischio infettivo: basso-moderato; il rischio si riduce nel tempo
- Rischio di riattivazione di TB latente aumentato
- Rischio neoplastico non aumentato
- Evidenza di prevenzione degli eventi cardio-vascolari ischemici

TNF blockers inhibit spinal radiographic progression in ankylosing spondylitis by reducing disease activity: results from the Swiss Clinical Quality Management cohort

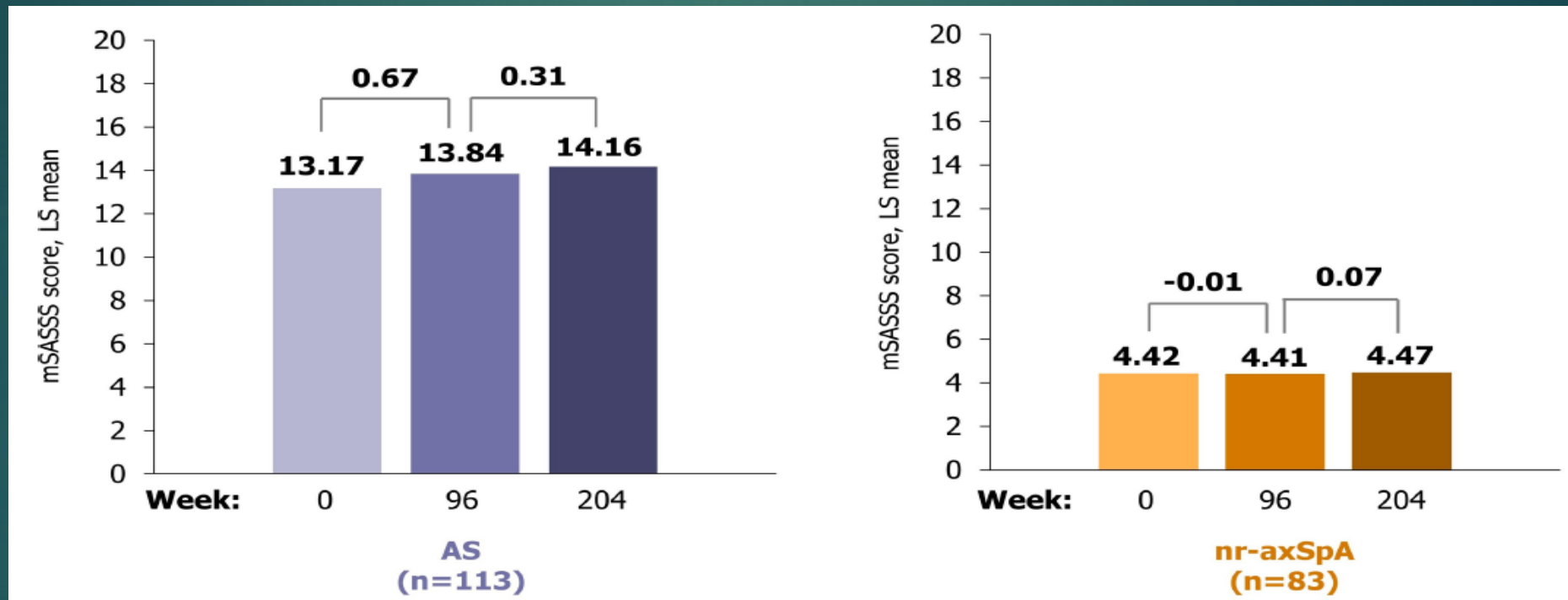
Molnar C, et al. Ann Rheum Dis 2018



- ✓ Association between TNFi use and reduced risk of spinal structural damage, both in terms of mSASSS and new syndesmophyte formation.
- ✓ The odds of radiographic progression were nearly halved over the next 2 years in patients having started TNFi treatment before this 2-year interval.
- ✓ The impact of TNFi on spinal radiographic progression is mediated by its decreasing effect on disease activity (ASDAS, BASDAI or CRP).

Limited radiographic progression and sustained reductions in MRI inflammation in patients with axial spondyloarthritis: 4-year imaging outcomes from the RAPID-axSpA phase III randomised trial

Van der Heijde D, et al. Ann Rheum Dis 2018



AS: mean mSASSS change from baseline was 0.98
nr-axSpA : mean mSASSS change of 0.06

The effectiveness of a real life dose reduction strategy for tumour necrosis factor inhibitors in ankylosing spondylitis and psoriatic arthritis

Warren Fong^{1,2,*}, Chris Holroyd^{3,4,*}, Brian Davidson³, Ray Armstrong³, Nick Harvey^{3,4}, Elaine Dennison^{3,4}, Cyrus Cooper^{3,4,5} and Christopher J. Edwards^{1,3}

Rheumatology 2016;55:1837-1842

Rheumatology key messages

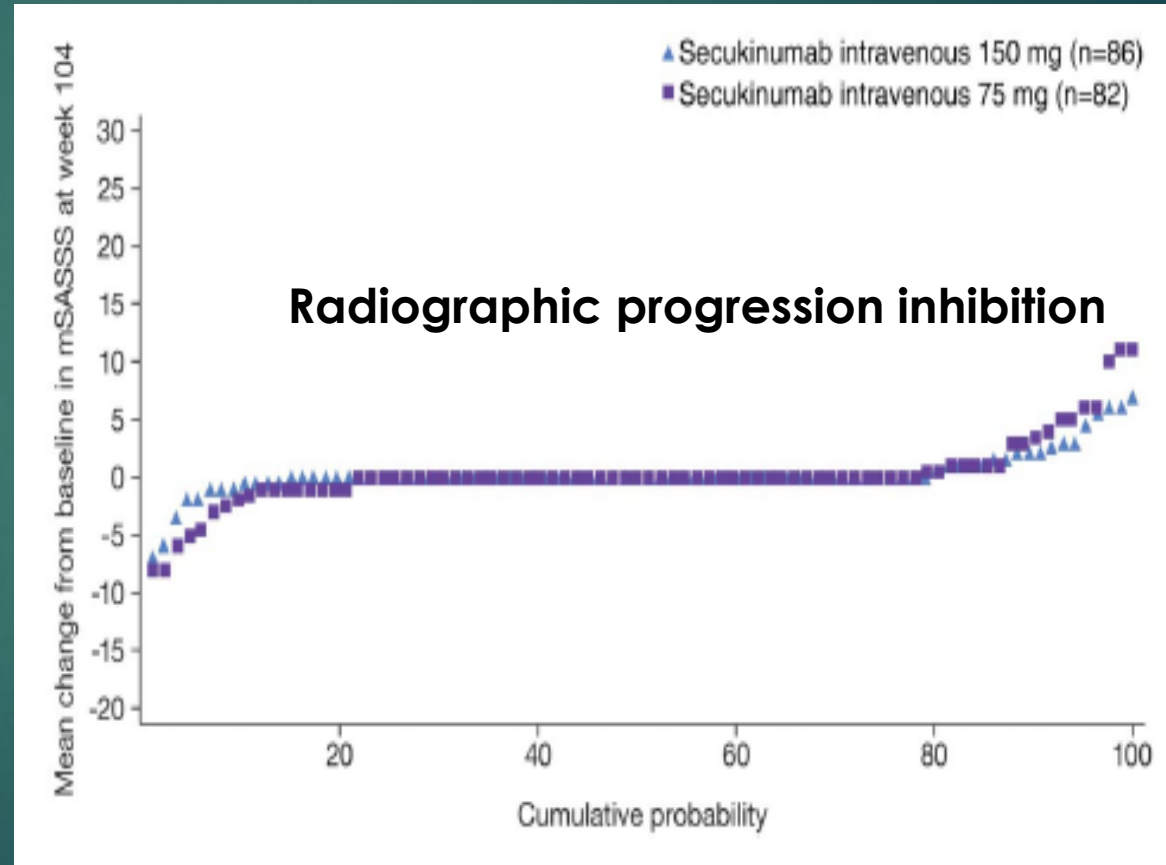
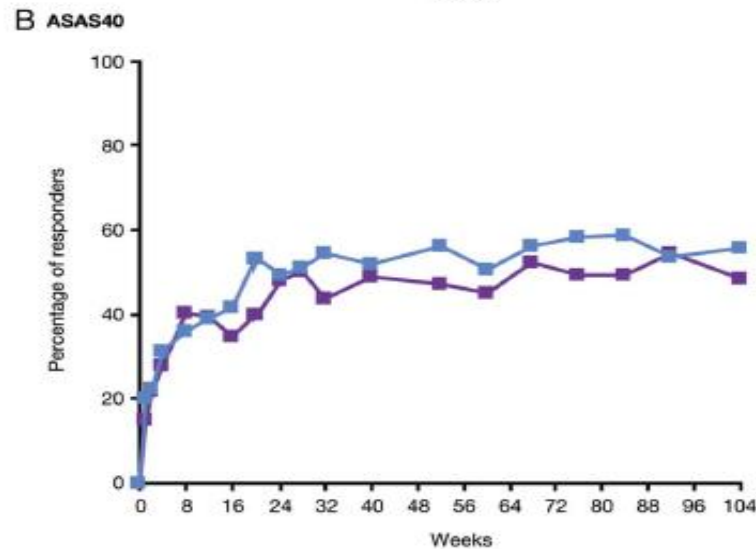
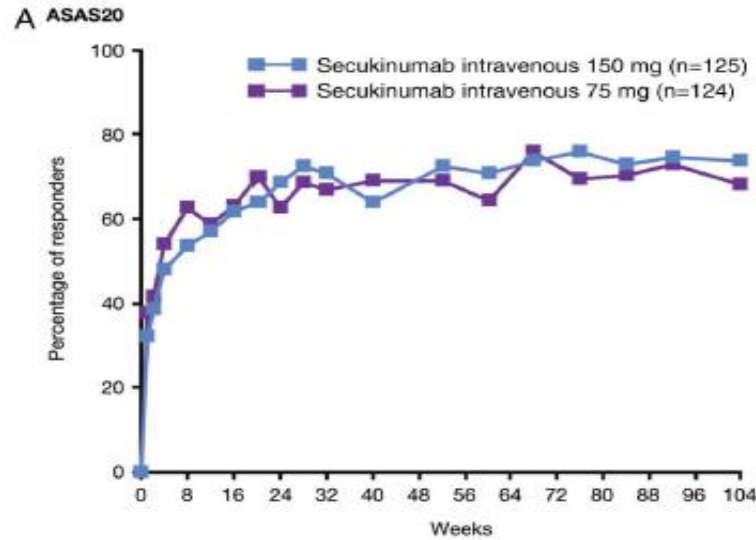
- Dose reduction may be successful in up to 60% of spondyloarthritis patients with longstanding and severe disease.
- Recapture of low disease activity appears possible for spondyloarthritis patients who fail dose reduction of TNFi therapy.

Anti-IL-17 in Ankylosing spondylitis

Effect of secukinumab on clinical and radiographic outcomes in ankylosing spondylitis: 2-year results from the randomised phase III MEASURE 1 study

Jürgen Braun,¹ Xenofon Baraliakos,¹ Atul Deodhar,² Dominique Baeten,³ Joachim Sieper,⁴ Paul Emery,⁵ Aimee Readie,⁶ Ruvie Martin,⁶ Shephard Mpofu,⁷ Hanno B Richards,⁷ for the MEASURE 1 study group

Ann Rheum Dis 2016



Ixekizumab, an interleukin-17A antagonist in the treatment of ankylosing spondylitis or radiographic axial spondyloarthritis in patients previously untreated with biological disease-modifying anti-rheumatic drugs (COAST-V): 16 week results of a phase 3 randomised, double-blind, active-controlled and placebo-controlled trial

Van der Heijde D, et al. Lancet 2018

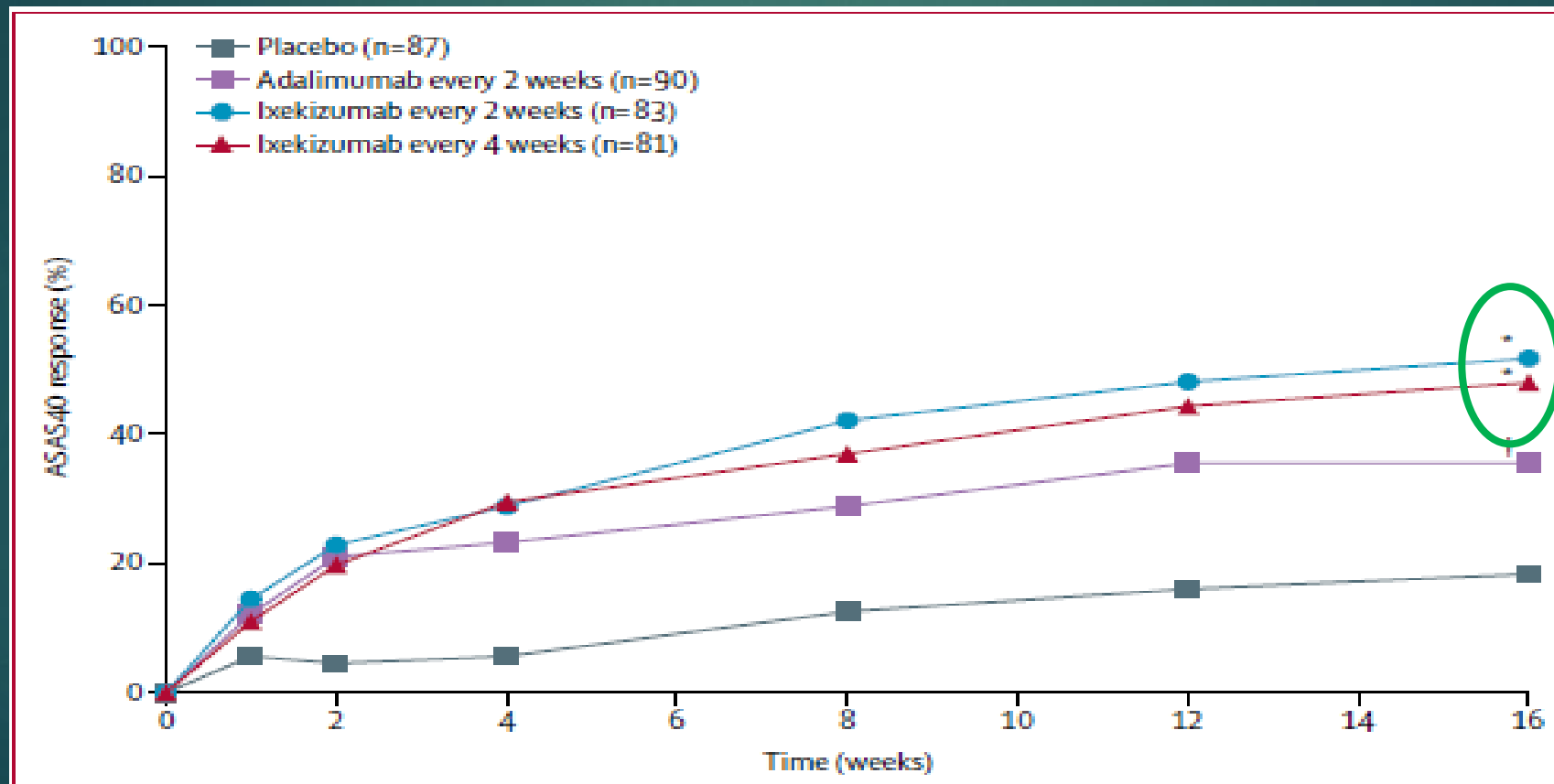


Figure 2: Proportion of patients achieving ASAS40 response through Week 16

Secukinumab and Ixekizumab safety

Table 3. Safety Profile during the 16-Week, Placebo-Controlled Induction Period of the MEASURE 1 and MEASURE 2 Studies.*

Variable	MEASURE 1		MEASURE 2	
	Secukinumab, Pooled Data (N=249)	Placebo (N=122)	Secukinumab, Pooled Data (N=145)	Placebo (N=74)
Exposure to study treatment — days	113.2±13.2	109.2±22.7	110.1±15.8	107.6±22.4
Any adverse event — no. of patients (%)	170 (68)	68 (56)	89 (61)	47 (64)
Death — no. of patients (%)	0	1 (<1)†	1 (<1)‡	0
Serious adverse event — no. of patients (%)§	5 (2)	5 (4)	8 (6)	3 (4)
Discontinuation of study treatment because of any adverse event — no. of patients (%)	3 (1)	5 (4)	7 (5)	4 (5)
Infection or infestation — no. of patients (%)¶	75 (30)	15 (12)	46 (32)	20 (27)
Common adverse events — no. of patients (%)¶				
Nasopharyngitis	30 (12)	9 (7)	14 (10)	3 (4)
Dyslipidemia	24 (10)	6 (5)	2 (1)	1 (1)
Headache	20 (8)	7 (6)	6 (4)	6 (8)
Adverse events of special interest — no. of patients (%)				
Candida infection	1 (<1)	0	1 (<1)	0
Crohn's disease	1 (<1)	0	1 (<1)	0
Major adverse cardiac event, adjudicated	0	0	1 (<1)‡	0
Neutropenia, grade 3 or 4	0	0	0	0

	Placebo (n=86)	Adalimumab Q2W (n=90)	Ixekizumab Q2W (n=83)	Ixekizumab Q4W (n=81)
Treatment-emergent adverse events	34 (40%)	44 (49%)	36 (43%)	34 (42%)
Mild	22 (26%)	28 (31%)	28 (34%)	22 (27%)
Moderate	11 (13%)	14 (16%)	6 (7%)	12 (15%)
Severe	1 (1%)	2 (2%)	2 (2%)	0
Discontinuation due to any adverse event	0	1 (1%)	3 (4%)	0
Serious adverse event	0	3 (3%)	1 (1%)	1 (1%)
Death	0	0	0	0
Common adverse events*				
Nasopharyngitis	6 (7%)	6 (7%)	5 (6%)	6 (7%)
Upper respiratory tract infection	4 (5%)	2 (2%)	4 (5%)	7 (9%)
Adverse events of special interest				
Neutropenia†				
Grade 1	2 (2%)	18 (20%)	8 (10%)	6 (8%)
Grade 2	1 (1%)	3 (3%)	3 (4%)	2 (3%)
Grade 3	0	1 (1%)	0	0
Grade 4	0	0	0	0
Hepatic	1 (1%)	2 (2%)	1 (1%)	1 (1%)
Infections	13 (15%)	19 (21%)	17 (20%)	16 (20%)
Serious infections	0	1 (1%)	1 (1%)	1 (1%)
Candida infections	0	1 (1%)	0	0
Reactivated tuberculosis	0	0	0	0
Injection site reactions	4 (5%)	7 (8%)	11 (13%)	3 (4%)
Allergic reactions and hypersensitivities	1 (1%)	4 (4%)	3 (4%)	3 (4%)
Potential anaphylaxis	0	0	0	0
Cerebrocardiovascular events	0	0	0	1 (1%)
Malignancies	0	0	0	0
Inflammatory bowel disease	0	0	1 (1%)	0
Depression	0	1 (1%)	0	0

Adalimumab represents an active reference arm; the study was not powered to test equivalence or noninferiority of active treatment arms to each other, including ixekizumab versus adalimumab. Q2W=every two weeks. Q4W=every four weeks. *Common treatment-emergent adverse events were defined as those that occurred at a frequency of at least 5% for patients receiving ixekizumab (both dosing regimens combined). †Neutropenia percentages are calculated for patients with a baseline and at least one post-baseline value. Placebo=86; adalimumab Q2W=89; ixekizumab Q2W=82; and ixekizumab Q4W=80.

Table 3: Adverse events during the 16-week masked treatment dosing period of COAST-V

Secukinumab and Ixekizumab

- ▶ Relevant efficacy on AS disease activity
- ▶ Inhibition of radiographic progression
- ▶ No TB reactivation risk
- ▶ Good safety profile



Contents lists available at ScienceDirect

Seminars in Arthritis and Rheumatism

journal homepage: www.elsevier.com/locate/semarthrit

Tailored first-line biologic therapy in patients with rheumatoid arthritis, spondyloarthritis, and psoriatic arthritis

Fabrizio Cantini^{a,*}, Laura Niccoli^a, Carlotta Nannini^a, Emanuele Cassarà^a, Olga Kaloudi^a, Ennio Giulio Favalli^b, Andrea Becciolini^b, Biggioggero Martina^b, Maurizio Benucci^c, Francesca Li Gobbi^c, Valentina Grossi^d, Maria Infantino^d, Francesca Meacci^d, Mariangela Manfredi^d, Serena Guiducci^e, Silvia Bellando-Randone^e, Marco Matucci-Cerinic^e, Rosario Foti^f, Marcella Di Gangi^f, Marta Mosca^g, Chiara Tani^g, Fabrizio Palmieri^h, Delia Golettiⁱ, On behalf of the Italian board for the Tailored BIOlogic therapy (ITABIO)¹

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^e Department of Biomedicine, Section of Rheumatology, University of Florence, Florence, Italy

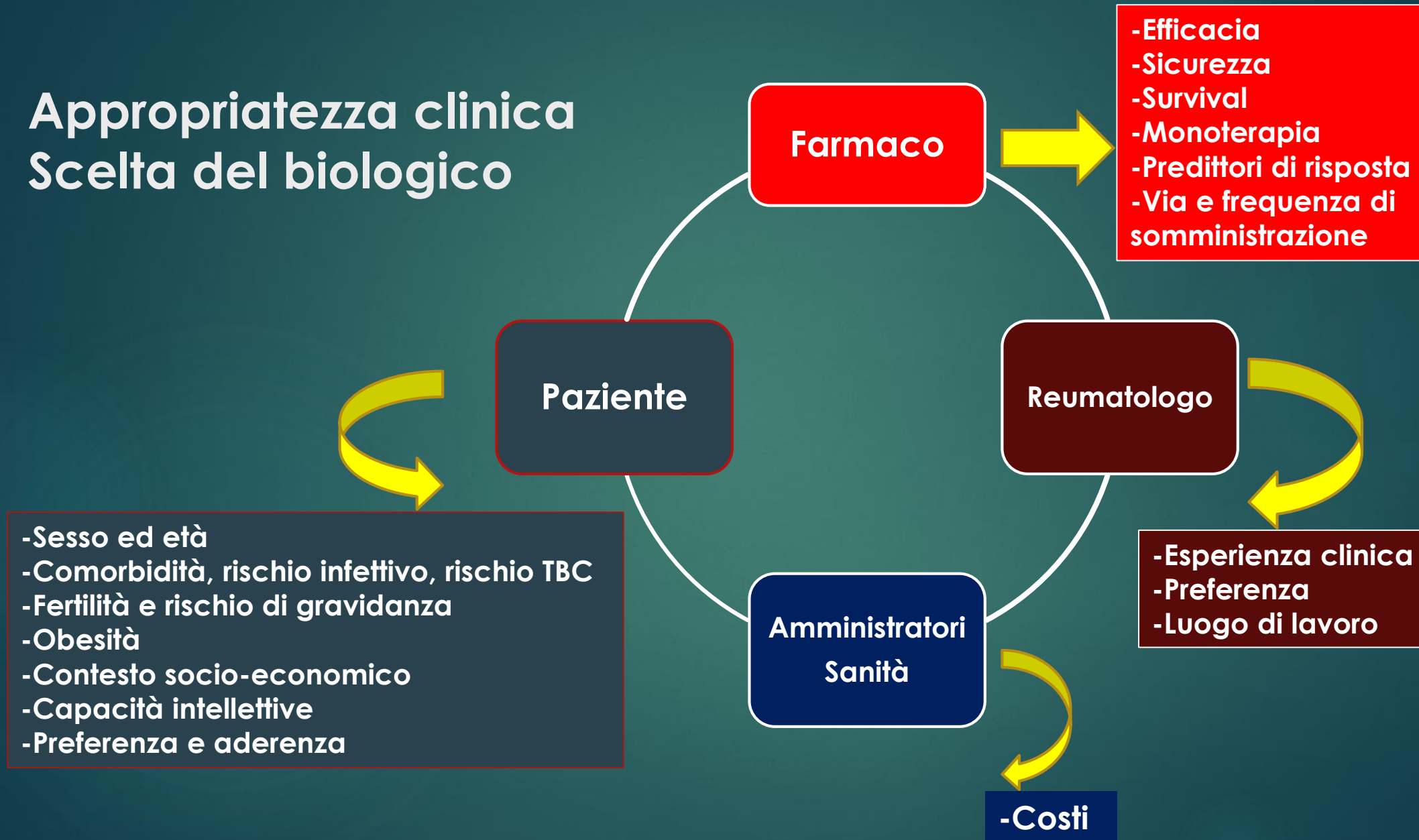
^f Rheumatology Unit, Vittorio-Emanuele University Hospital of Catania, Catania, Italy

^g UO di Reumatologia, Dipartimento di Medicina Clinica e Sperimentale, Università di Pisa, Italy

^h Clinical Department, "L. Spallanzani" National Institute for Infectious Diseases (INMI), IRCCS. Rome, Italy

ⁱ Translational Research Unit, Department of Epidemiology and Preclinical Research, "L. Spallanzani" National Institute for Infectious Diseases (INMI), IRCCS. Rome, Italy

Appropriatezza clinica Scelta del biologico

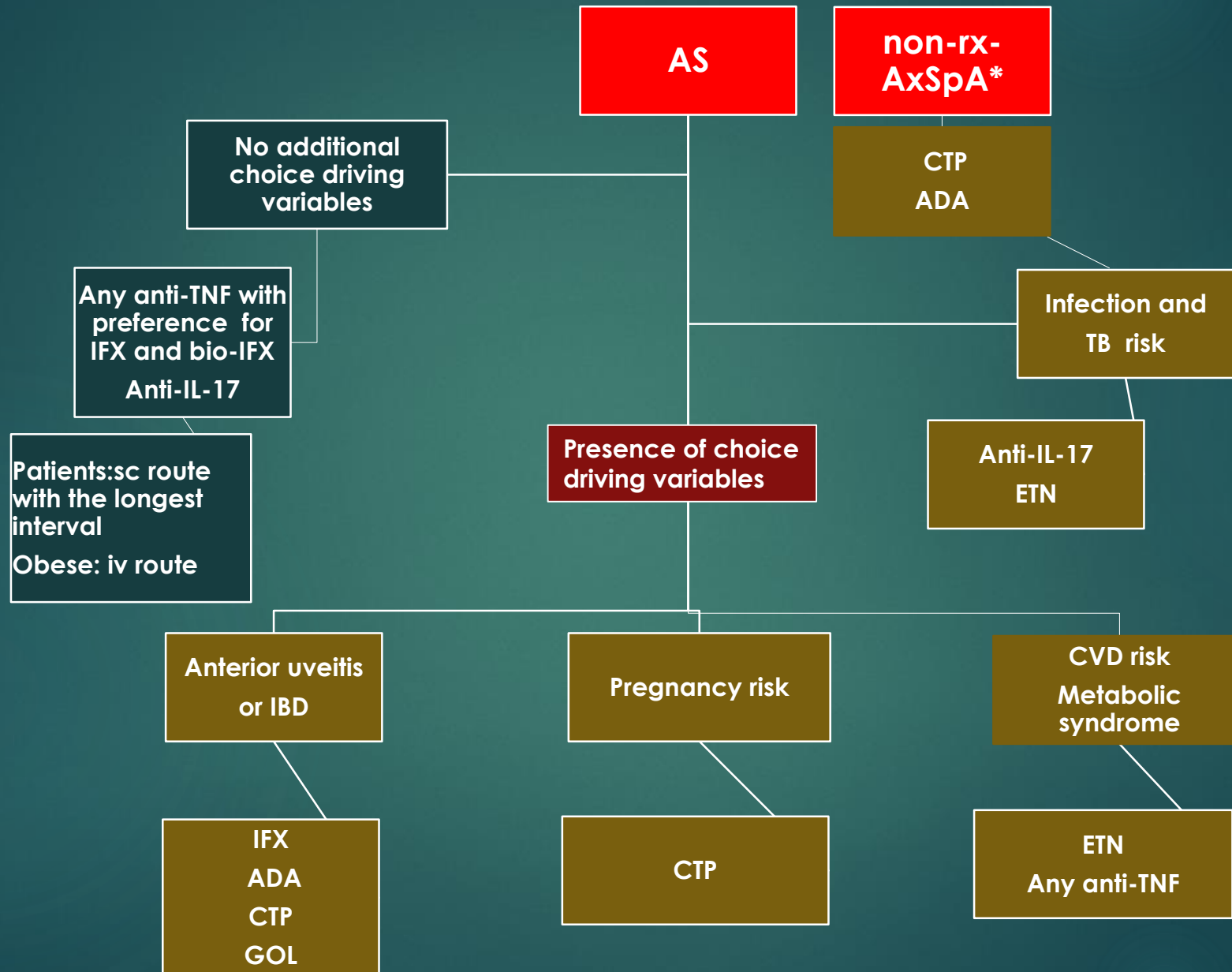


Therapy choice in axial SpA

Driving variables

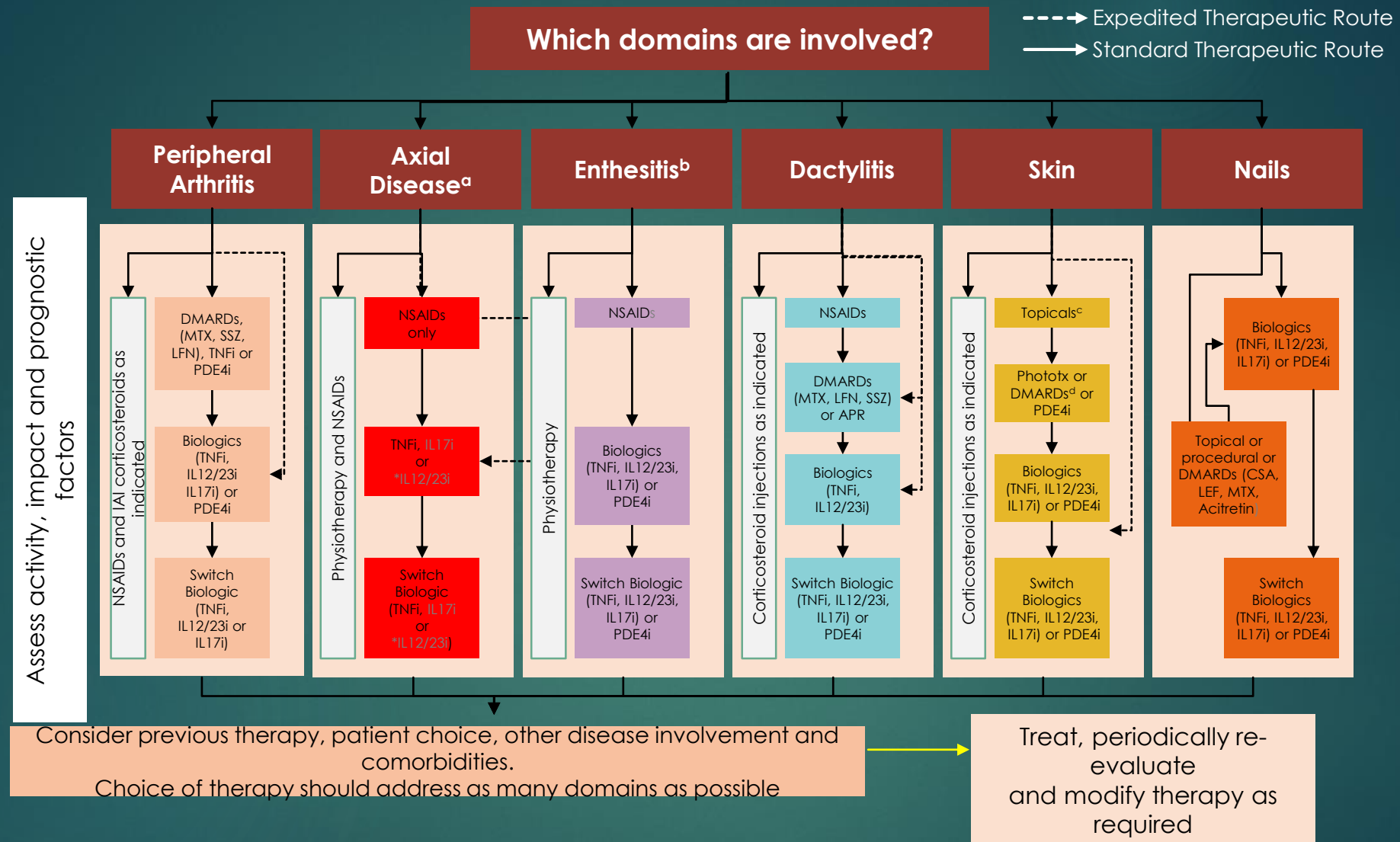
- Efficacy
- Safety
- Infection risk (including TB)
- Extra-articular manifestations
- Route of administration
- Cardiovascular risk
- Pregnancy risk
- Patient's preference
- Cost

ITABIO recommendations for first biologic choice in AS and non-Rx axial SpA.

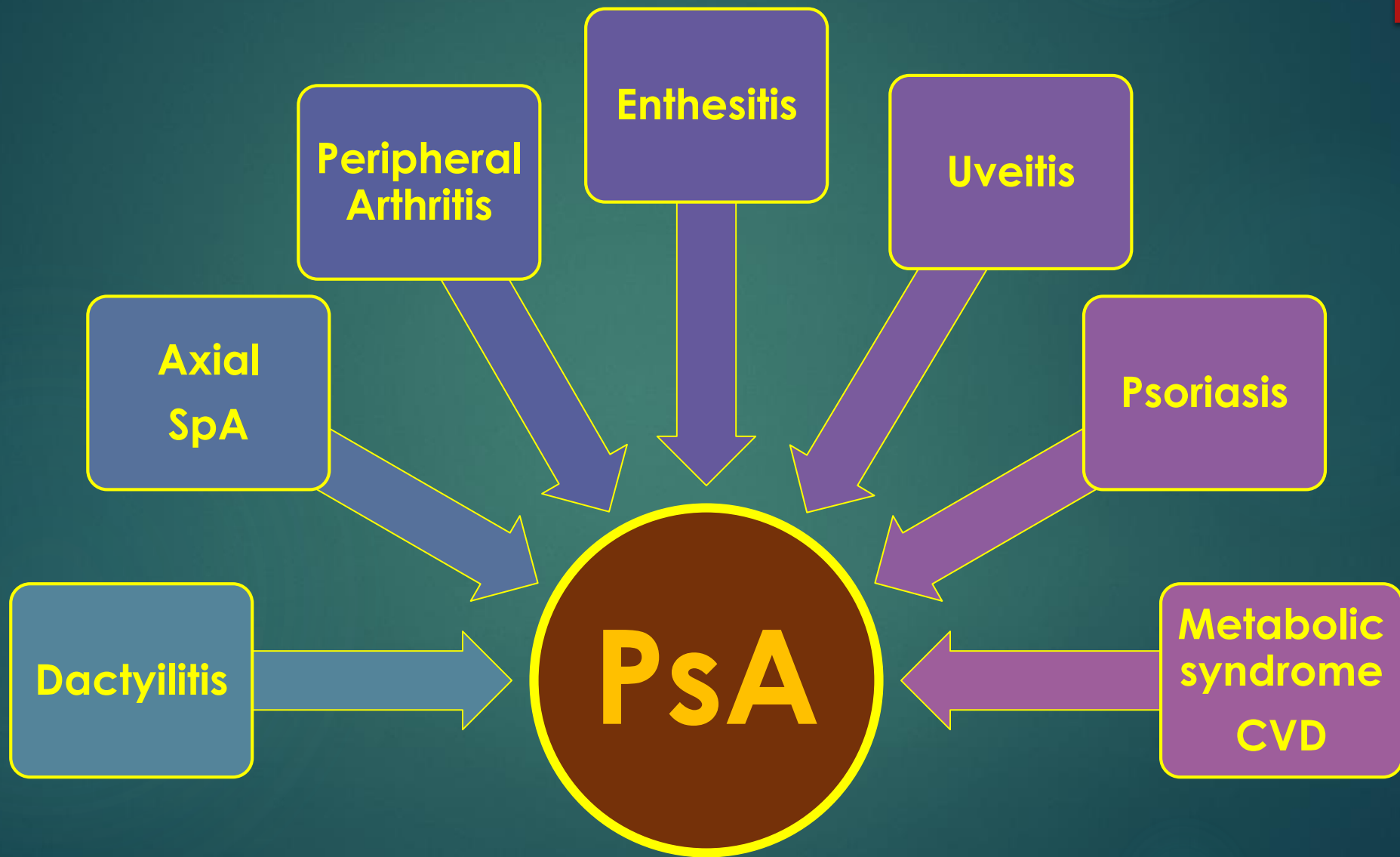


*Only ADA, CTP and ETN have been approved for non-rx-AxSpA in Europe.

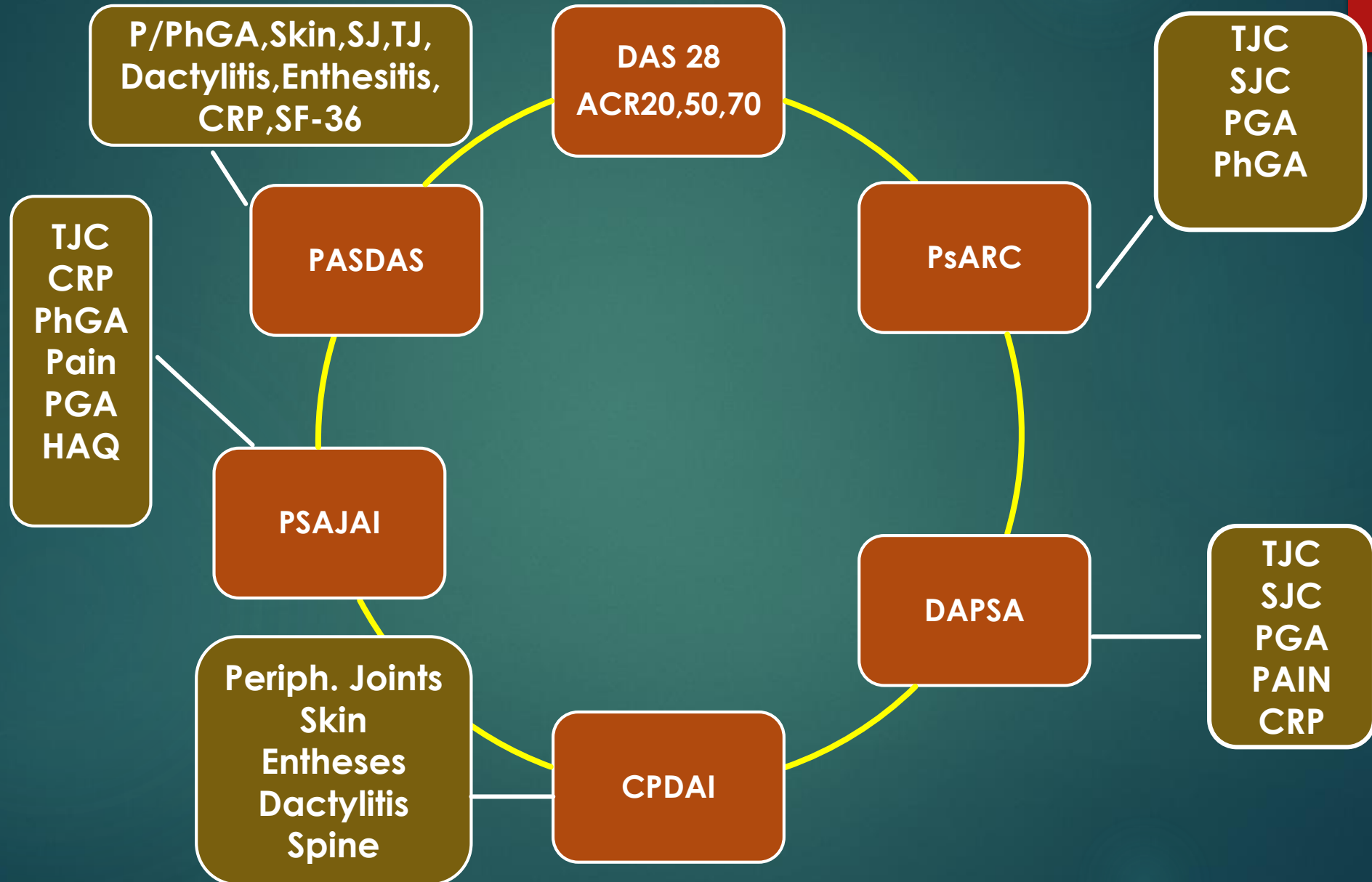
PsA therapy



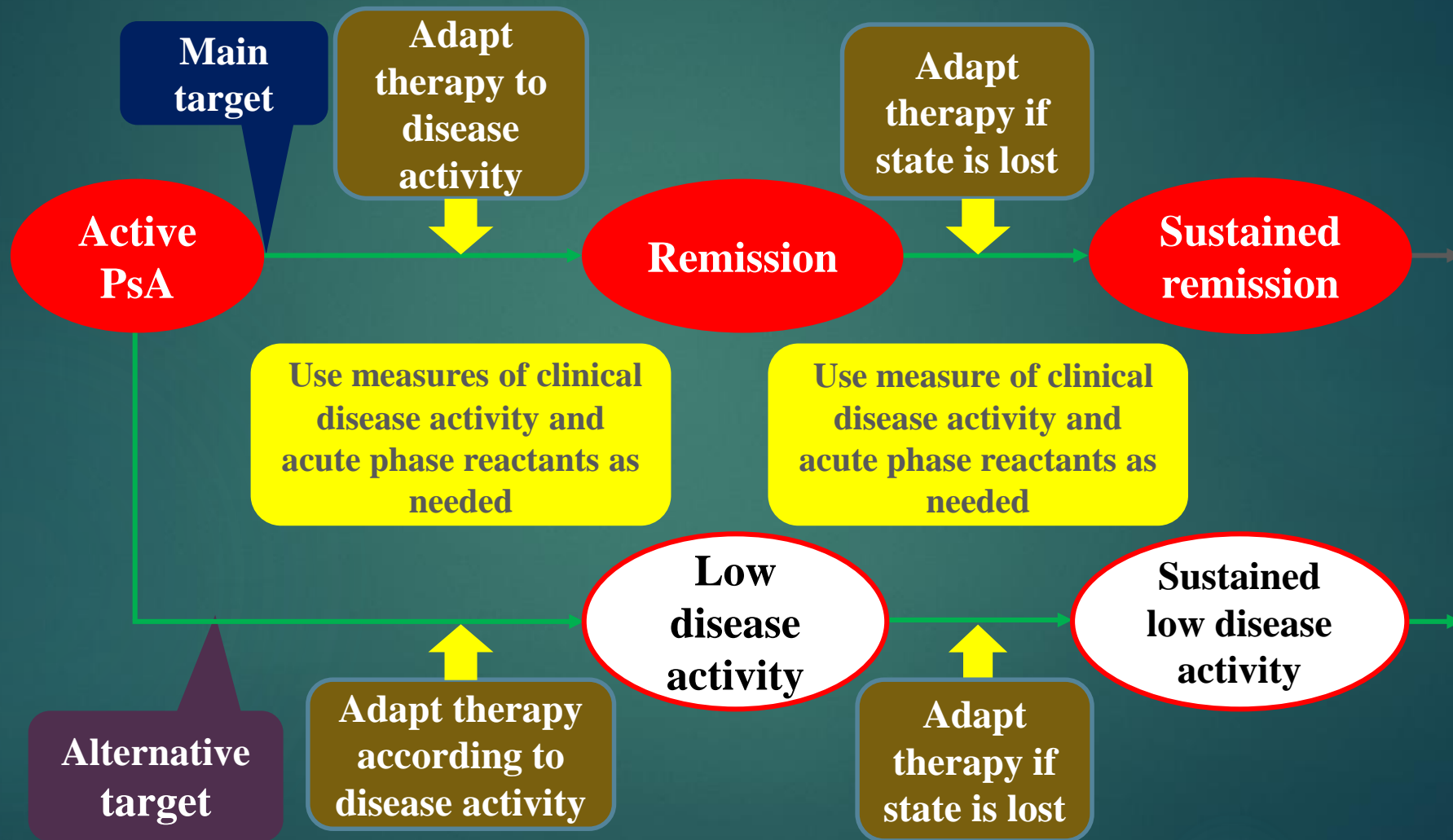
PsA: clinical manifestations



AP: misura dell'attività di malattia

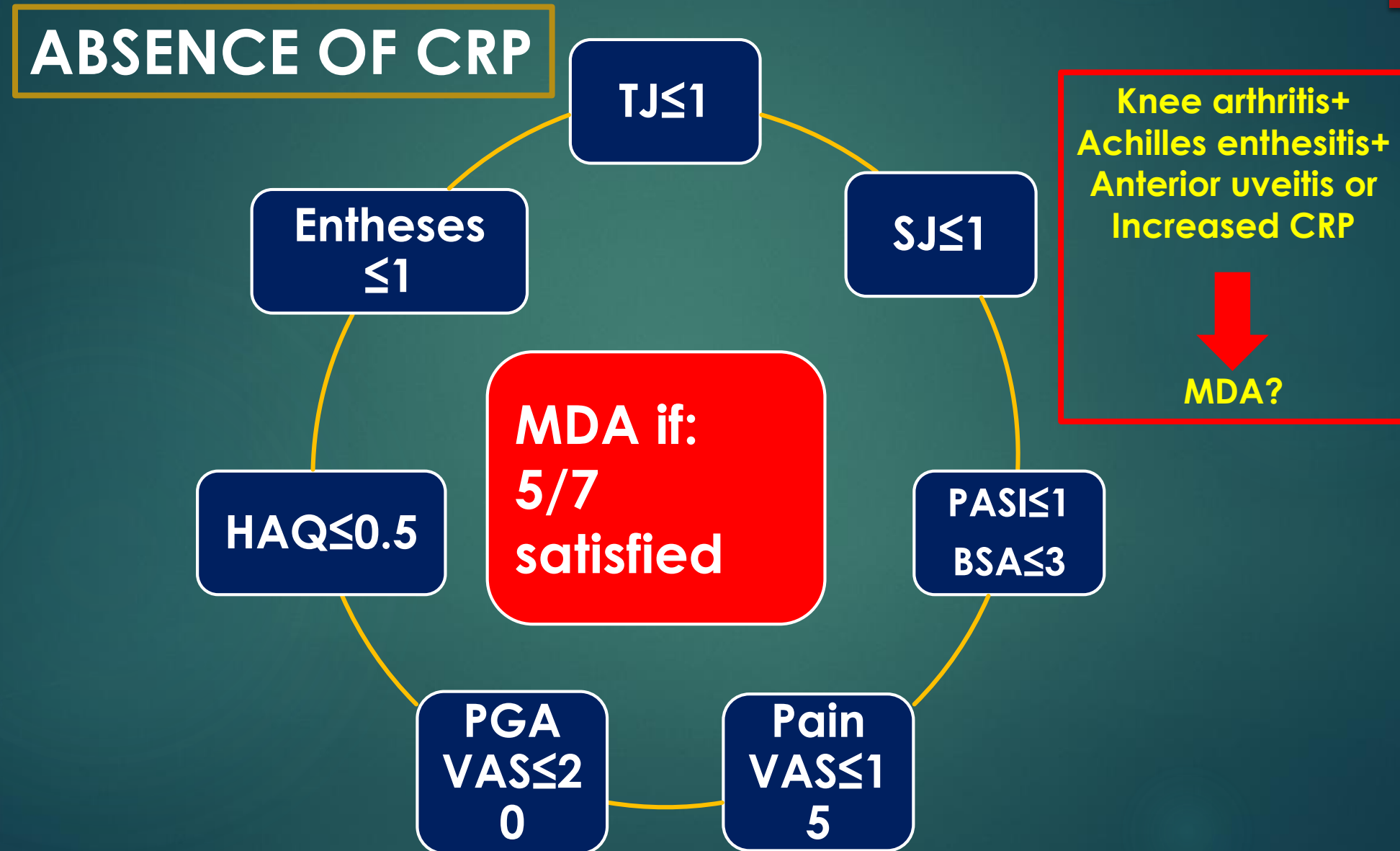


PsA T2T strategy



PsA: MDA definition

Coates LC, et al. Ann Rheum Dis 2010



PsA: farmaco ideale

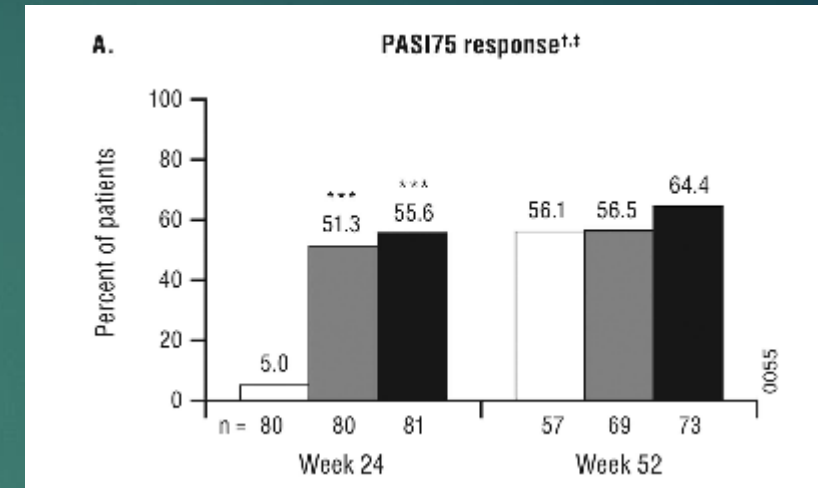
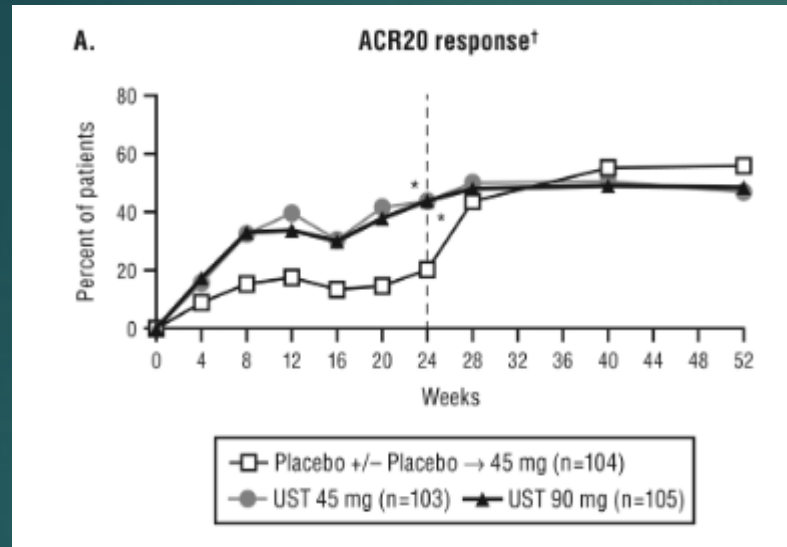
- ▶ Efficacia sulle manifestazioni articolari periferiche
- ▶ Efficacia sulle manifestazioni assiali
- ▶ Efficacia su entesite e dattilite
- ▶ Efficacia sulle manifestazioni extra-articolari
- ▶ Efficacia sulla psoriasi
- ▶ BMI
- ▶ Rallentamento/arresto della progressione radiologica
- ▶ Persistenza di efficacia nel tempo
- ▶ Buon profilo di sicurezza d'impiego
- ▶ Via ed intervalli di somministrazione preferita dal paziente
- ▶ Basso costo

Anti-TNFs in PsA

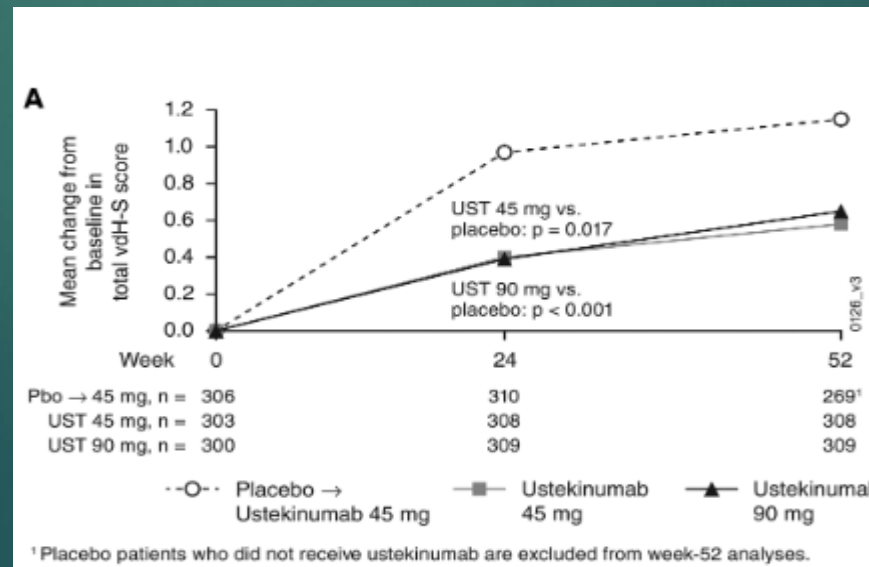
- ▶ Efficacia nel 60-70% dei pazienti
- ▶ Evidenza sulla capacità di rallentare/arrestare la progressione radiologica
- ▶ Anti-TNFs monoclonali efficaci sull'Uveite
- ▶ Efficacia sulla psoriasi
- ▶ Evidenza di efficacia sulle manifestazioni cardiovascolari
- ▶ Efficacia sulla IBD che si associa nel 7%-8% dei casi
- ▶ Rischio infettivo aumentato
- ▶ Rischio di riattivazione di TBC latente aumentato

Ustekinumab in AP

Ritchlin C, et al. Ann Rheum Dis 2013



Radiographic outcome



Efficacia sulla
M. Di Crohn

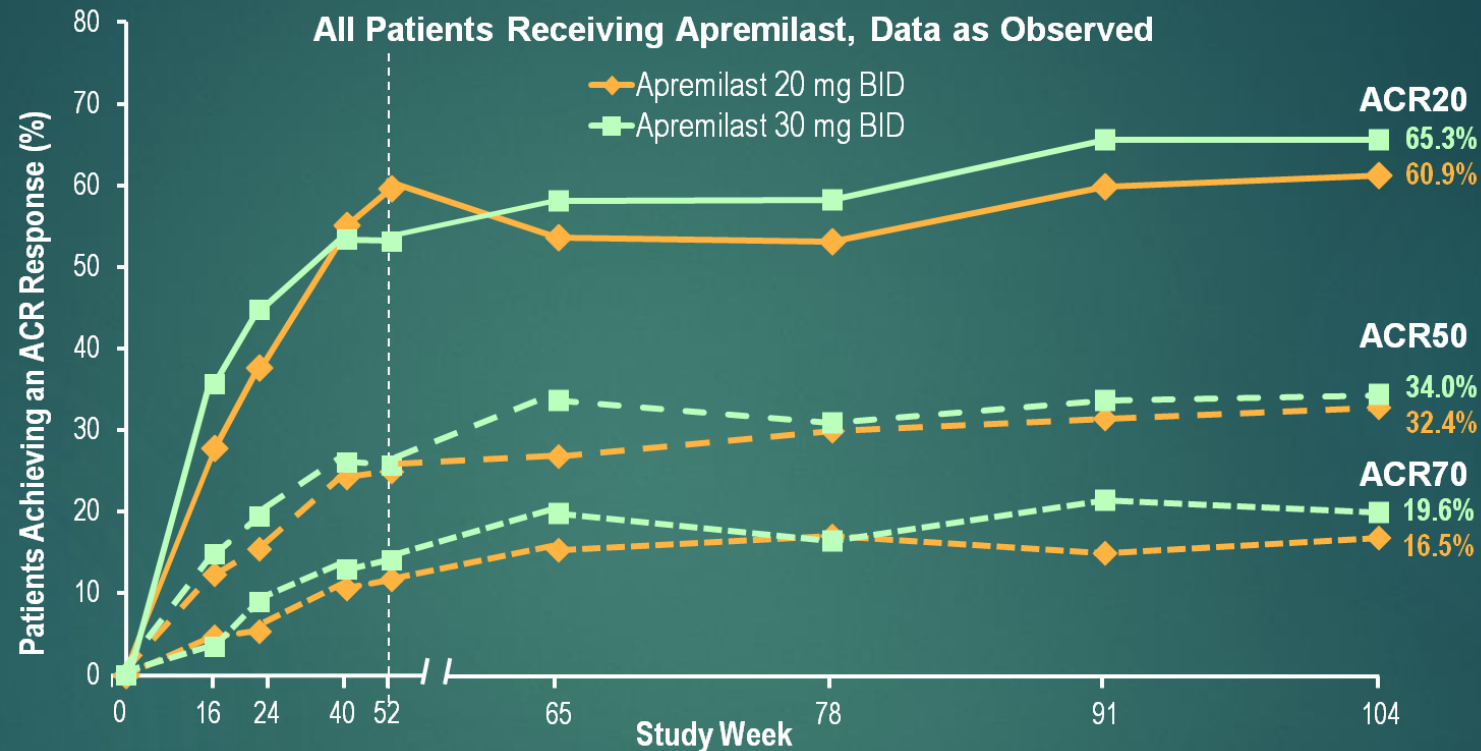
Secukinumab Inhibition of Interleukin-17A in Patients with Psoriatic Arthritis

Mease PJ, et al. NEJM 2015

Table 2. Comparison of Efficacy at Week 24 during the Placebo-Controlled Phase.*

Outcome	Secukinumab, 150 mg (N=202)	Secukinumab, 75 mg (N=202)	Placebo (N=202)
ACR20 response: primary end point — no. (%)†	101 (50.0)‡	102 (50.5)‡	35 (17.3)
Prespecified secondary end points			
PASI 75 response — no./total no. (%)§	66/108 (61.1)‡	70/108 (64.8)‡	9/109 (8.3)
PASI 90 response — no./total no. (%)§	49/108 (45.4)‡	53/108 (49.1)‡	4/109 (3.7)
Change from baseline in DAS28-CRP	-1.62±0.08‡	-1.67±0.09‡	-0.77±0.12
Change from baseline in SF-36 physical component summary	5.91±0.53‡	5.41±0.52‡	1.82±0.72
Change from baseline in disability assessment (HAQ-DI score)	-0.40±0.04‡	-0.41±0.04‡	-0.17±0.05
ACR50 response — no. (%)	70 (34.7)‡	62 (30.7)‡	15 (7.4)
Change from baseline in joint structural damage (mTSS score)¶	0.13±0.09	0.02±0.12	0.57±0.19
Patients with resolution of dactylitis — no./total no. (%)**	109/208 (52.4)		18/116 (15.5)
Patients with resolution of enthesitis — no./total no. (%)**	121/255 (47.5)		15/117 (12.8)

Apremilast: Modified ACR20/50/70 Responses Over 104 Weeks



ACR20	Apremilast 20 mg BID, n/m	109/183	89/167	85/161	88/148	84/138
	Apremilast 30 mg BID, n/m	101/190	96/166	92/159	98/150	94/144
ACR50	Apremilast 20 mg BID, n/m	45/180	44/166	47/159	47/151	45/139
	Apremilast 30 mg BID, n/m	49/191	56/168	49/160	50/150	49/144
ACR70	Apremilast 20 mg BID, n/m	21/179	25/168	26/156	22/151	23/139
	Apremilast 30 mg BID, n/m	27/191	33/169	26/161	32/152	28/143

Analyses include all patient data, including the placebo-controlled period, regardless of when patients started taking apremilast (baseline, Week 16, or Week 24).

ACR20/50/70=American College of Rheumatology 20/50/70; n/m=number of responders/number of patients with sufficient data for evaluation.

Kavanaugh A, et al. ACR 2014 [poster 1590].

Ixekizumab in PsA

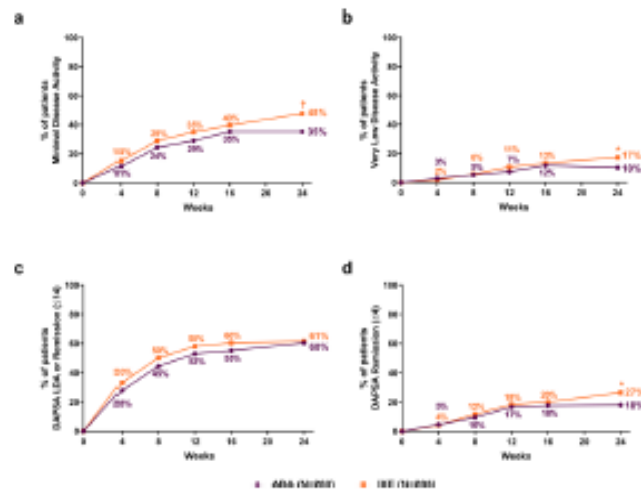
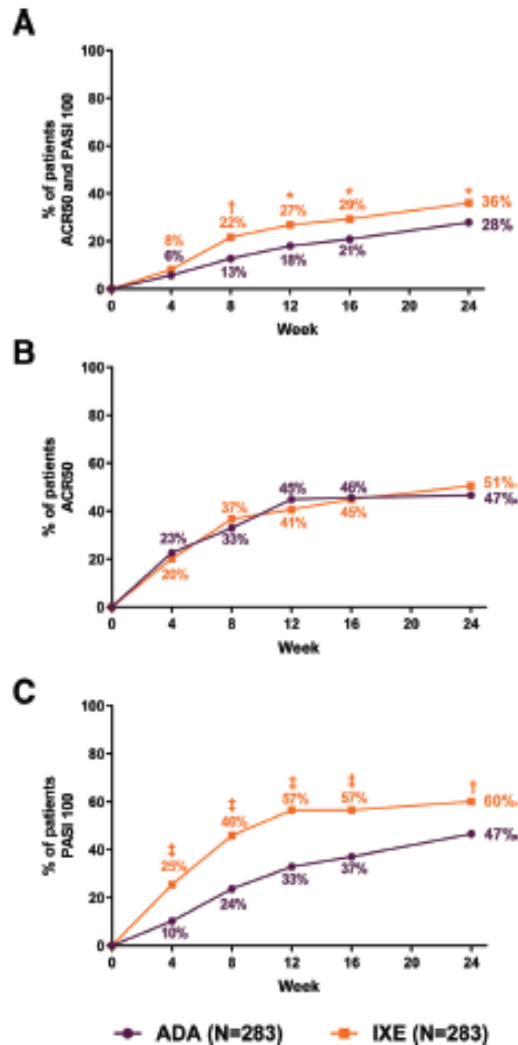


Figure 3 Clinical response rates for treat-to-target outcomes through week 24. (A) Percentage of patients achieving minimal disease activity. (B) Percentage of patients achieving very low disease activity. (C) Percentage of patients achieving a DAPSA score of ≤ 14 (LDA or remission). (D) Percentage of patients achieving a DAPSA score ≤ 4 (remission). IXE versus ADA: * $P < 0.05$, † $p < 0.01$, ‡ $p < 0.001$. ADA, adalimumab; DAPSA, Disease Activity in Psoriatic Arthritis; IXE, Ixekizumab; LDA, low disease activity.

Digestif (EPIMAD) criteria for adjudication of suspected IBD, where ‘probable’ and ‘definite’ classifications are considered as confirmed cases.¹⁴ Three TEAEs were identified in two IXE-treated patients as suspected IBD. One IXE-treated patient had an event reported as ‘colitis’ that was sent for adjudication, but there was insufficient information to make a definitive classification. The same patient also had an event of ‘colitis ulcerative’, adjudicated as possible ulcerative colitis, which resulted in study discontinuation. Another IXE-treated patient with no prior medical history of IBD had an event reported as ‘colitis’ that was adjudicated as probable

Table 3 Safety outcomes

	IXE (n=283)	ADA (n=283)
Extent of exposure, mean days (total patient-years)	236.8 (183.5)	228.9 (117.3)
Treatment-emergent adverse events	197 (69.6)	173 (61.1)
Mild	97 (34.3)	87 (30.7)
Moderate	91 (32.2)	71 (25.1)
Severe	9 (3.2)	15 (5.3)
Serious adverse events	10 (3.5)	24 (8.5)
Deaths	0	0
Discontinuations due to adverse events	7 (2.5)	13 (4.6)
Adverse events of special interest		
Infections	102 (36.0)	87 (30.7)
Serious infections	4 (1.4)	8 (2.8)
Candida infections	7 (2.5)	2 (0.7)
Injection-site reactions	27 (9.5)	9 (3.2)
Allergic/hypersensitivity reactions	7 (2.5)	11 (3.9)
Potential anaphylaxis	0	0
Cytopaenias	5 (1.8)	11 (3.9)
Cerebrocardiovascular events*	3 (1.1)	5 (1.8)
Malignancies	0	3 (1.1)
Depression	3 (1.1)	7 (2.5)
Inflammatory bowel disease	2 (0.7)†	0
Ulcerative colitis	1 (0.4)‡	0
Crohn's disease	1 (0.4)§	0

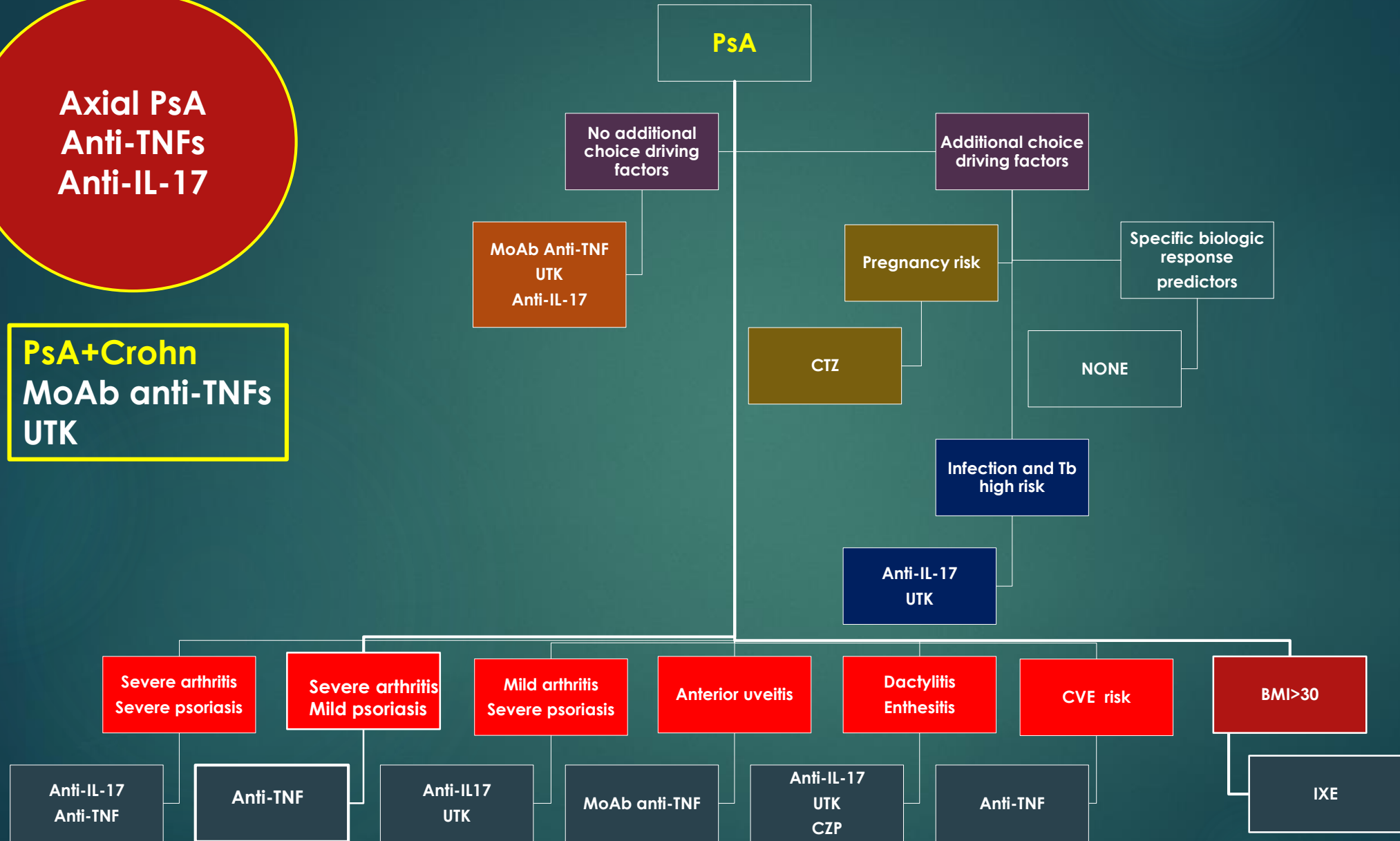
Non-anti-TNFs in PsA

- ▶ Efficacia sulle manifestazioni articolari degli anti-IL-17, lievemente inferiore per Apremilast
- ▶ Efficacia su dattilite ed entesite superiore a quella degli anti-TNFs
- ▶ Efficacia sulla psoriasi superiore a quella degli anti-TNFs
- ▶ Rischio infettivo assente per Apremilast
- ▶ Buon profilo di sicurezza d'impiego
- ▶ Rischio di riattivazione TBC assente

ITABIO recommendations for first biologic choice in patients with PsA

Axial PsA
Anti-TNFs
Anti-IL-17

PsA+Crohn
MoAb anti-TNFs
UTK



Small molecule
Apremilast
-Elevato rischio
Infettivo
-Rischio TB
-Pregresse
neoplasie



Grazie per l'attenzione