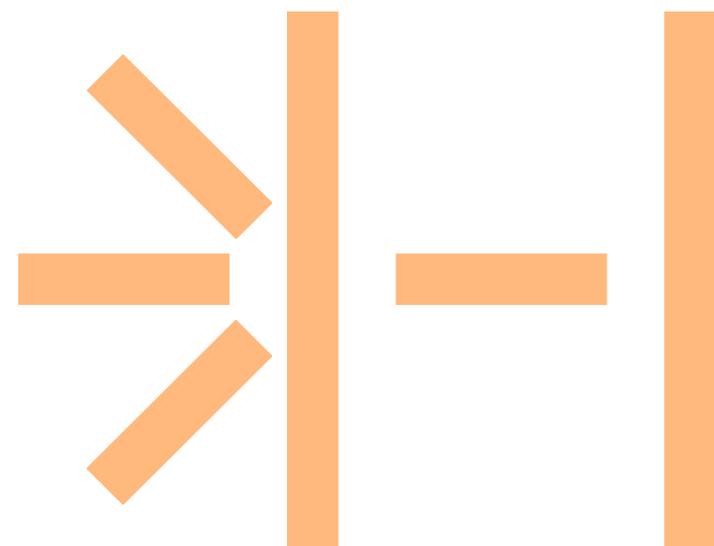




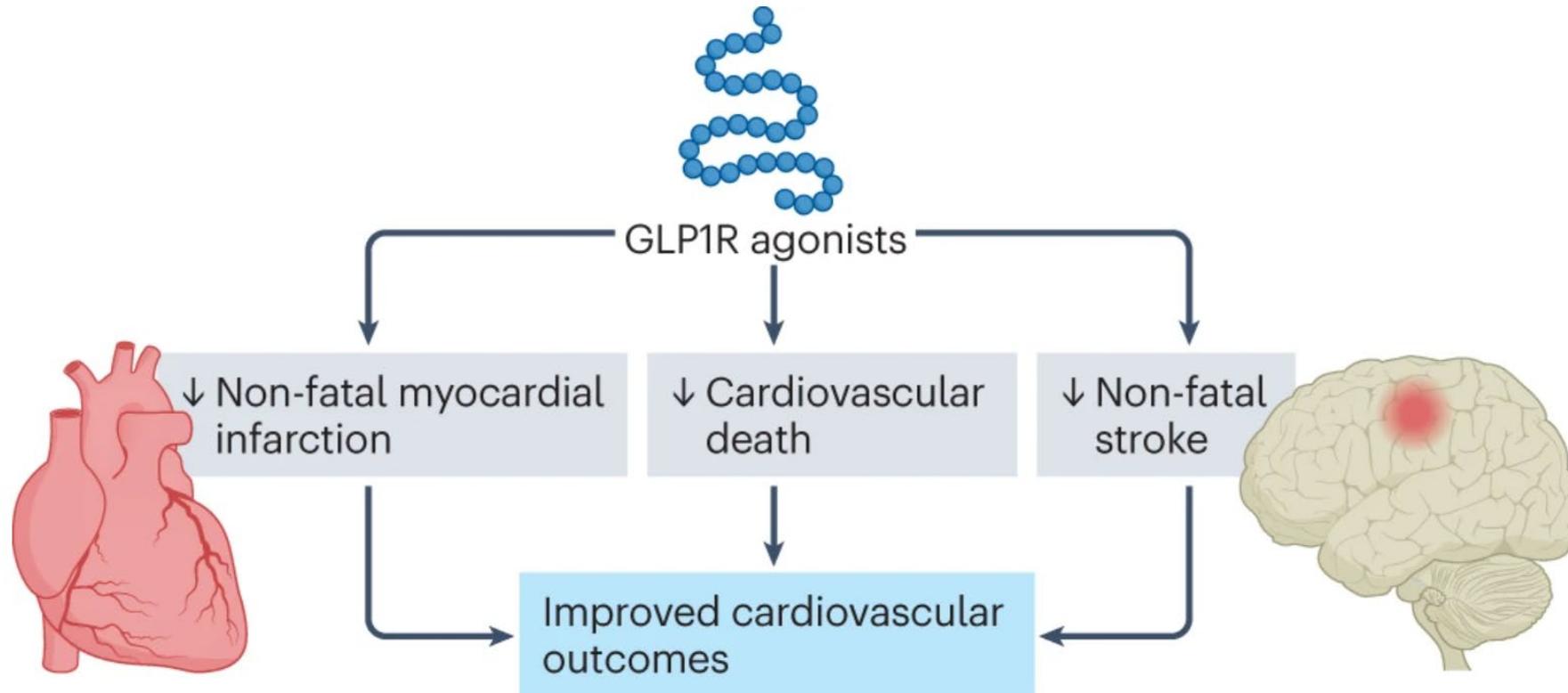
EULAR Highlights: Rheumatoid arthritis

Diego Kyburz
Rheumatologie
Universitätsspital Basel



Cardiovascular risk in RA

- Reduced CV risk with GLP1R agonists in D.m.II but also non-diabetic individuals

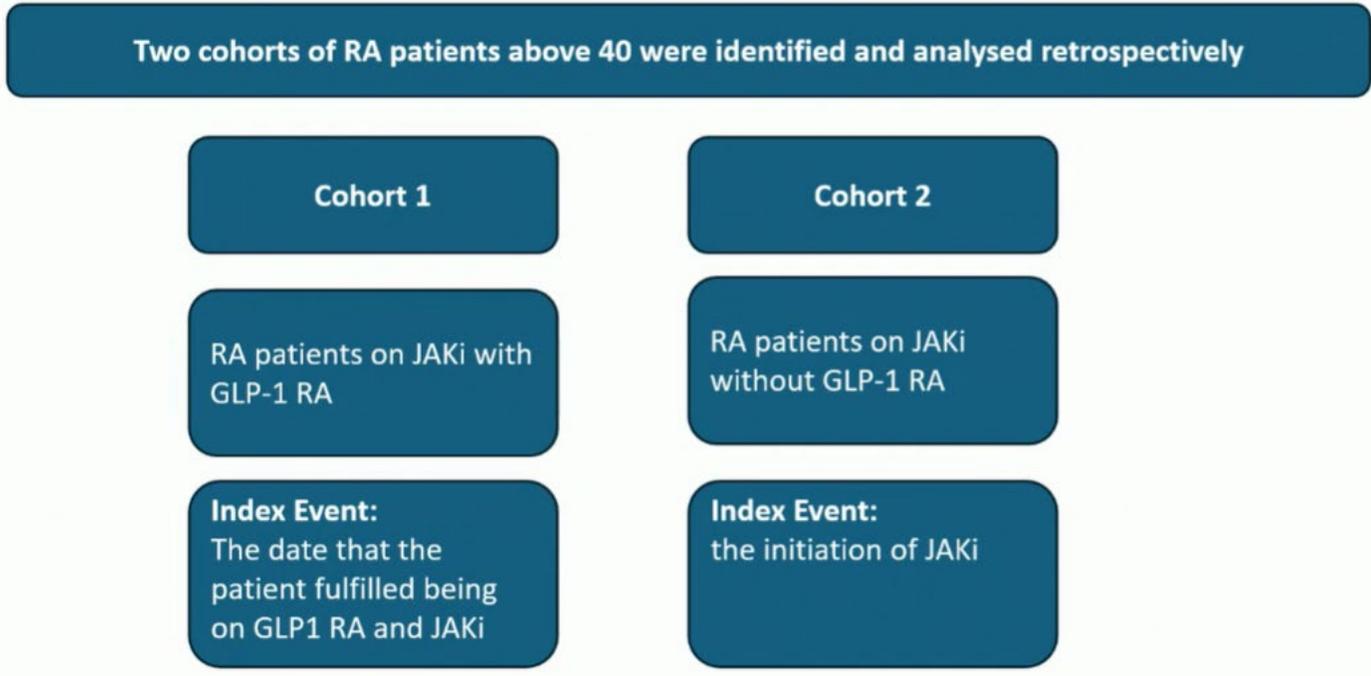


GLP1 agonists and CV risk in RA



GLP1 agonists mitigate the risk of cardiovascular events in Rheumatoid Arthritis patients treated with JAK inhibitors

Dr. Asmaa Beltagy
Rheumatology Unit, Faculty of Medicine
Alexandria University, Egypt



GLP1 agonists and CV risk in RA



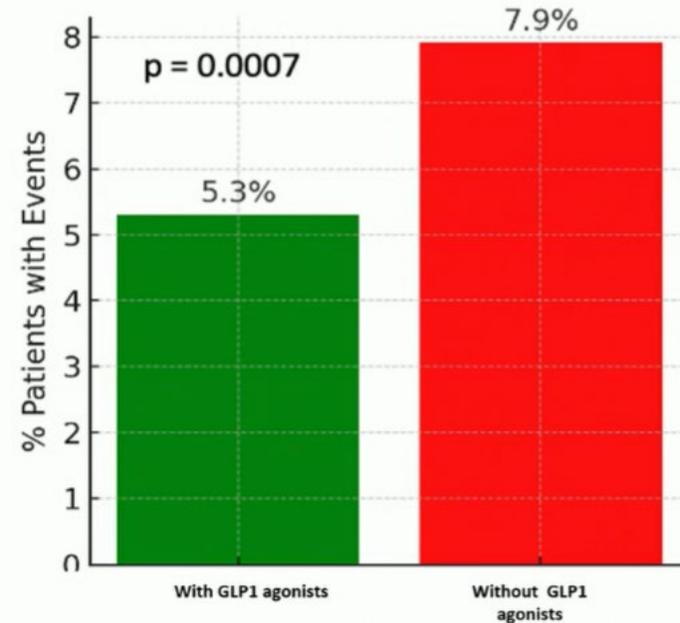
- Retrospective analysis of data from the TriNetX platform

- **Propensity score matching** was performed to balance baseline characteristics, including age, sex, diabetes mellitus, hypertension, obesity, hyperlipidemia, primary thrombophilia, smoking, glucocorticoid use, and anticoagulant/antiplatelet use.
- **Each group included 2,449 patients** after propensity score matching
- Patients with outcomes before the index event were excluded from the analysis.

GLP1 agonists and CV risk in RA

- **Follow up:** 5 years after the index event
- **Primary outcomes were incidence of:**
 - ✓ acute coronary syndromes
 - ✓ cerebral infarction
 - ✓ acute peripheral arterial thrombosis
 - ✓ deep venous thrombosis/ pulmonary embolism
 - ✓ and overall arterial CV events

Overall CV events in RA patients on JAKi with and without GLP1



GLP1 agonists and CV risk in RA

Cardiovascular and venous events in RA patients treated with JAK inhibitors with and without GLP1 agonists

	Number of patients	Patients with acute CV events	Risk	Risk ratio	P value
Acute Coronary Syndromes					
Group 1	2,198	88	4.0%	0.645	0.0009
Group 2	2,191	136	6.21%		
Acute Cerebral Infarction					
Group 1	2369	50	2.1%	0.753	0.12
Group 2	2355	66	2.8%		
Peripheral arterial thrombotic events					
Group 1	2,443	<10	0.41%	0.711	0.41
Group 2	2,433	14	0.58%		
Acute Deep Venous Thrombotic Events and pulmonary embolism					
Group 1	2,270	84	3.7%	0.69	0.007
Group 2	2,257	121	5.4%		

GLP1 agonists and CV risk in RA

Conclusion

- GLP-1 receptor agonists may reduce cardiovascular and venous thrombotic risks in RA patients treated with JAK inhibitors.
- Controlled research is needed to verify the results of our preliminary study.
- Can GLP-1 RA co-medication support the prescription of JAKi in patients older than 50 or with more than one cardiovascular risk factor?
- Can GLP-1 RA co-medication add synergism to the anti-inflammatory effect of JAKi in RA patients?

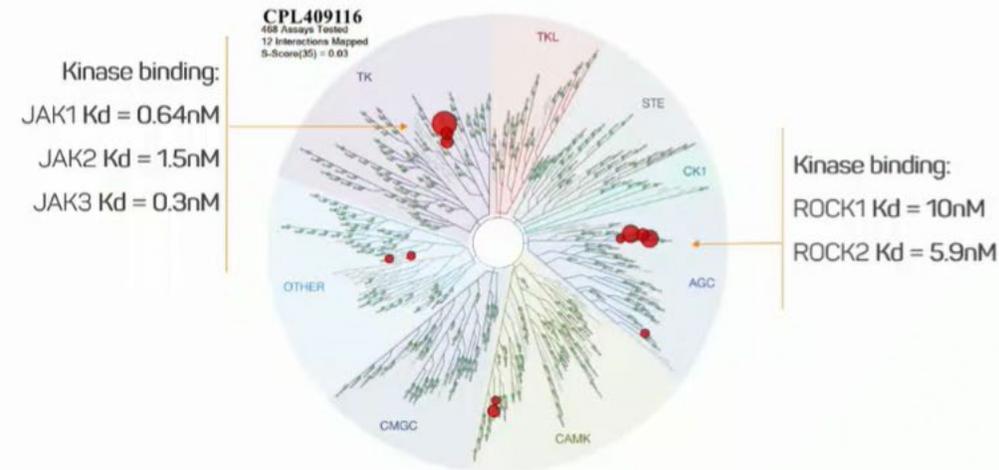
Dual JAK/ROCK inhibition in Rheumatoid Arthritis – results of a phase 2 study of CPL'116

Bartłomiej Kisiel, MD, PhD

Military Institute of Medicine - National Research Institute,
Clinical Research Support Center, Warszawa, Poland

Dual JAK/ROCK inhibitor - an overview

KinomeScan™ for CPL'116 activity towards 403 kinases
High selectivity for JAKs and ROCKs families



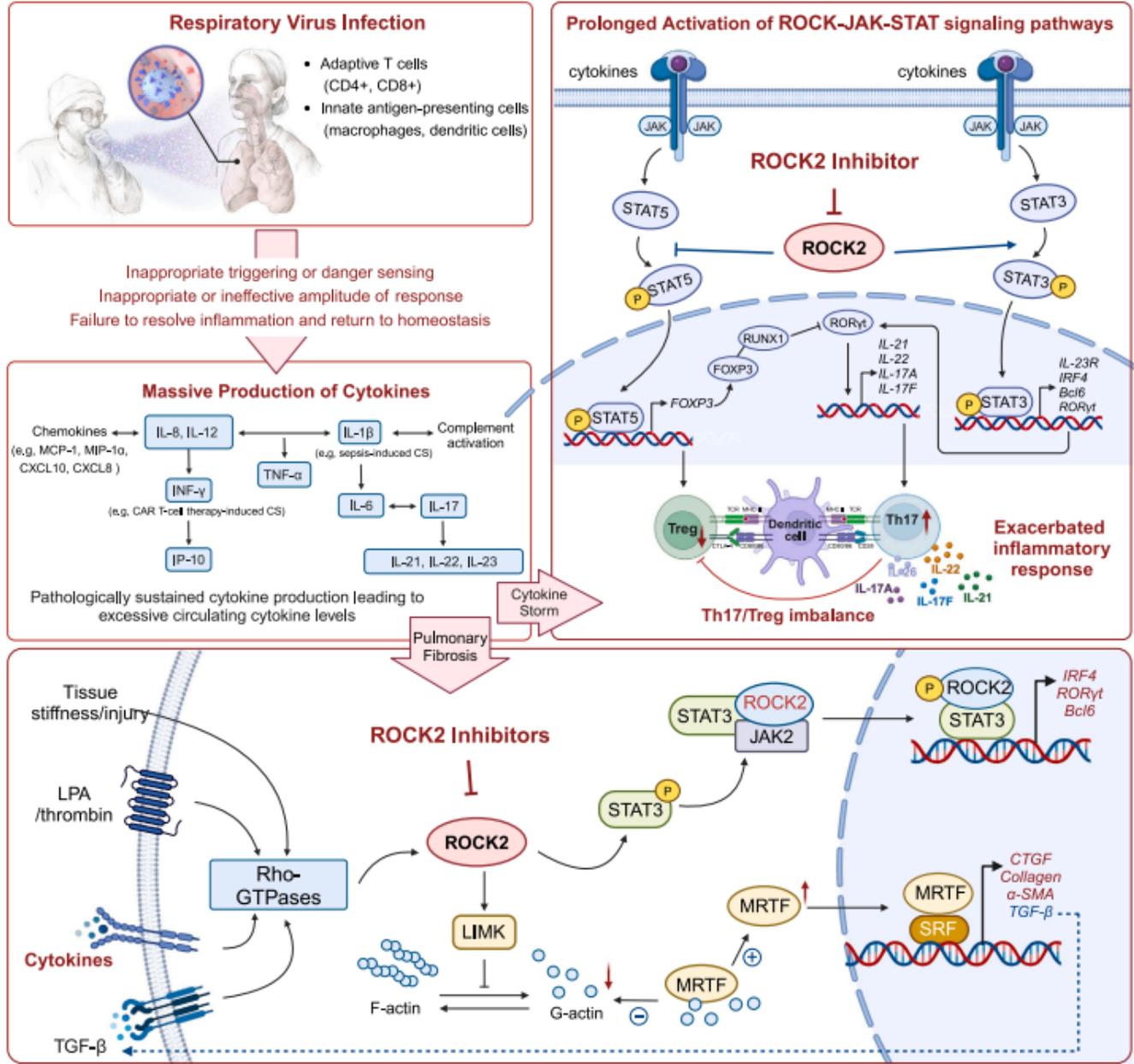
CPL'116 is:

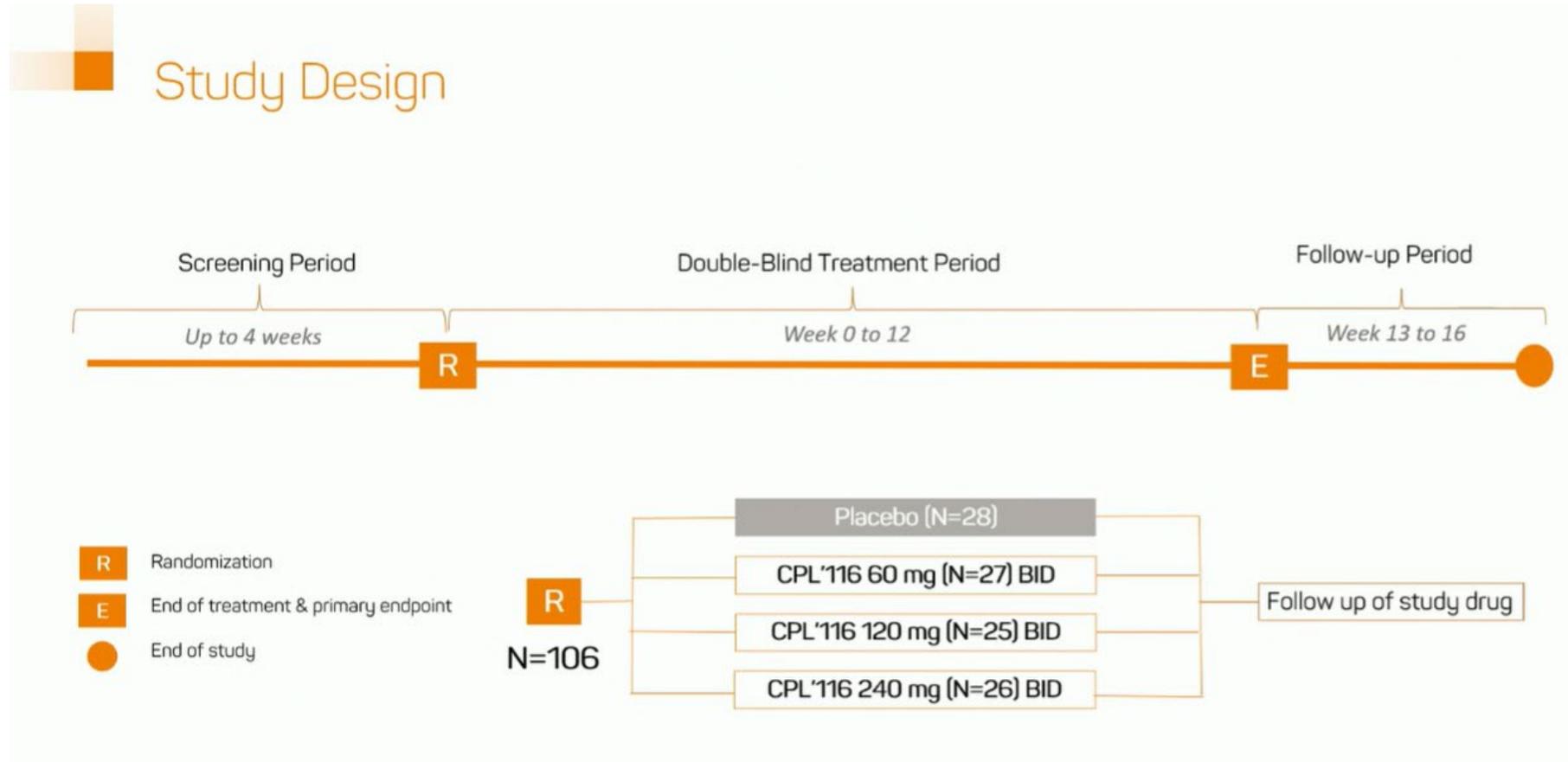
- Celon Pharma's novel asset
- orally administered
- small molecule

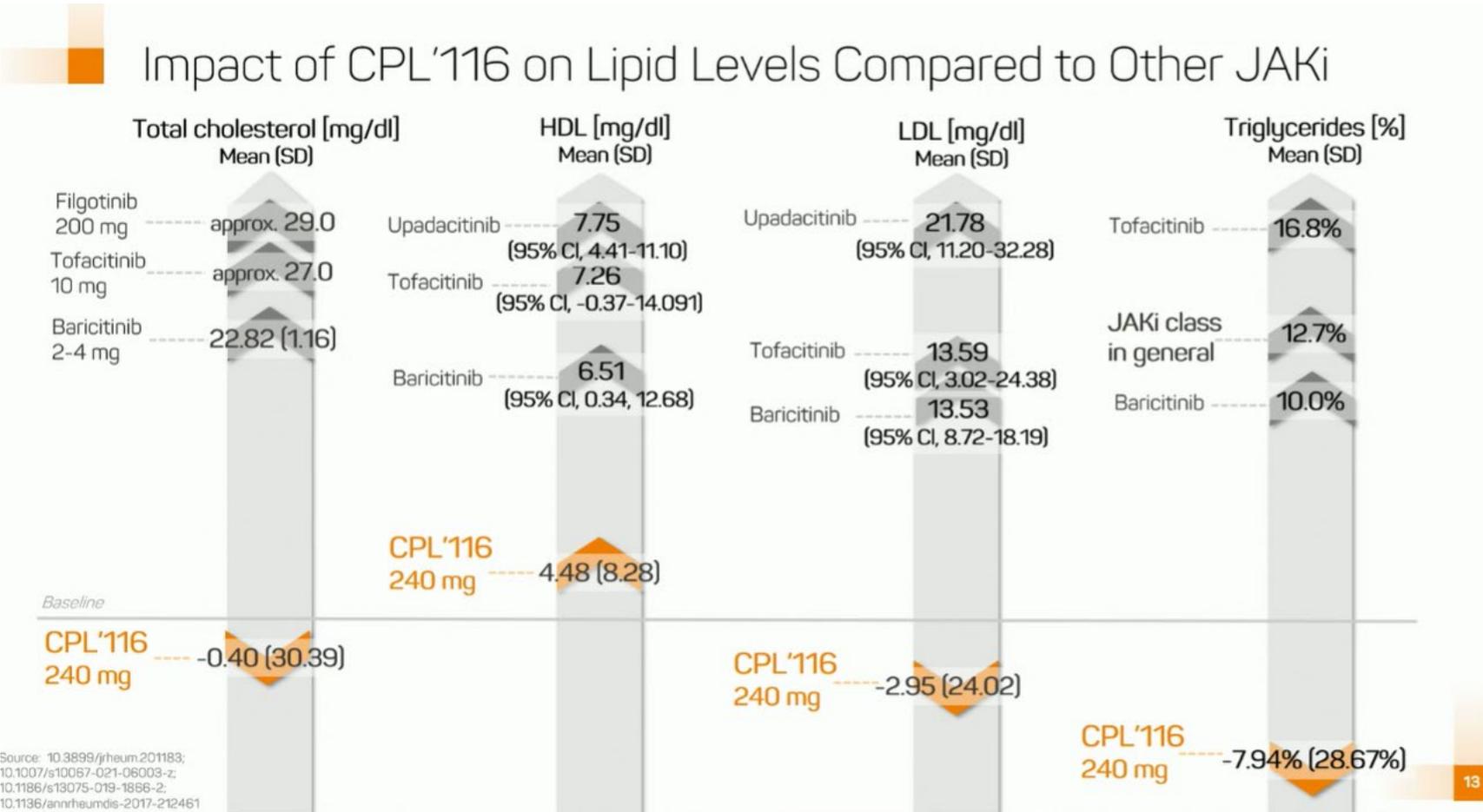
CPL'116 targets:

- cytokines signaling network through JAK-STAT
- regulation of the balance Th17/regulatory T cells and control of profibrotic pathways.

RA new drugs







- Double specific JAK / ROCK inhibitor

CPL'116 holds potential therapeutic benefits beyond JAK inhibition. In vitro and in vivo studies showed that blocking ROCK signaling pathway had a beneficial effect on endothelial function and also inhibited profibrotic pathways. In addition, the influence of ROCK kinase pathway on lipid metabolism has been demonstrated.

JAK inhibitors: cancer risk

Cancer incidence among rheumatoid arthritis patients treated with JAK-inhibitors compared to bDMARDs: data from an international collaboration of registers (the "JAK-pot" study)

Kim Lauper for the JAK-pot investigators
Geneva University Hospital, Switzerland

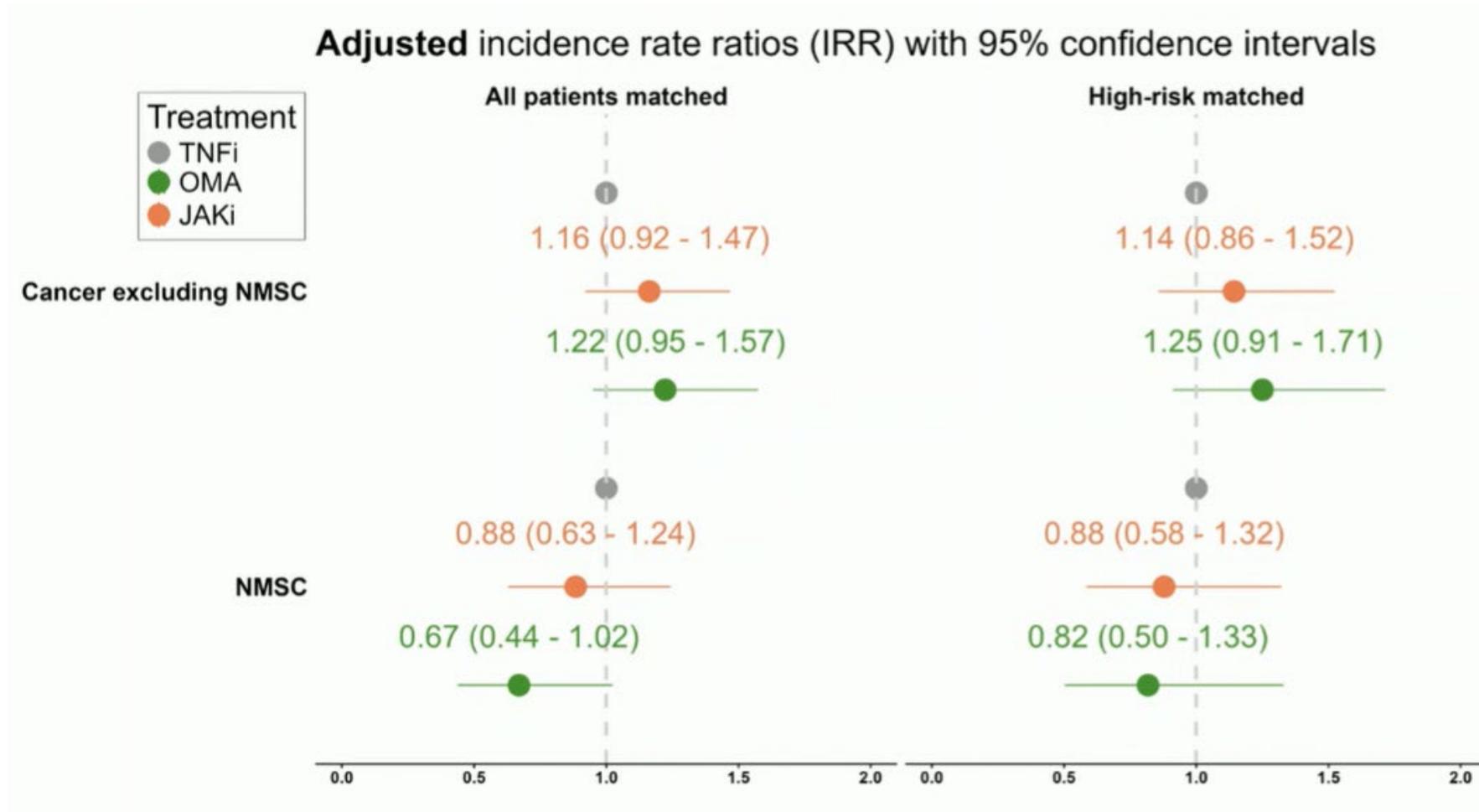


JAK inhibitors: cancer risk

MATCHED DATA (JAKi / TNFi)	JAKi (tofacitinib (29%), baricitinib (38%), upadacitinib (26%), filgotinib (7%)) n = 12'916	TNFi (etanercept (34%), adalimumab (35%), golimumab (9%), certolizumab (9%), infliximab (5%), unspecified (8%)) n = 12'916
	Past malignancy (%)	3.2
Female (%)	81.4	81.4
Treatment duration, years (median [IQR])	1.5 [0.6, 3.1]	1.1 [0.5, 2.7]
Age, years (mean (SD))	57.7 (12.1)	56.2 (13.3)
Disease duration, years (median [IQR])	10.4 [5.0, 17.4]	7.9 [3.5, 14.7]
Seropositivity (%)	79.0	74.2
Previous b/ts DMARD (%)		
0	23.9	32.0
1	21.4	34.1
2	20.1	16.2
≥ 3	34.7	17.7
Concomitant csDMARD (%)	51.2	61.3
Concomitant GC (%)	44.0	42.8
CRP, mg/L (mean (SD))	11.0 (20.9)	11.6 (20.4)
CDAI (mean (SD))	26.8 (13.5)	27.6 (13.6)
DAS 28 (mean (SD))	26.8 (13.5)	27.6 (13.6)
HAQ (mean (SD))	1.2 (0.7)	1.2 (0.7)
BMI (mean (SD))	26.8 (5.6)	27.0 (5.7)
Tobacco (ever) (%)	33.0	34.9

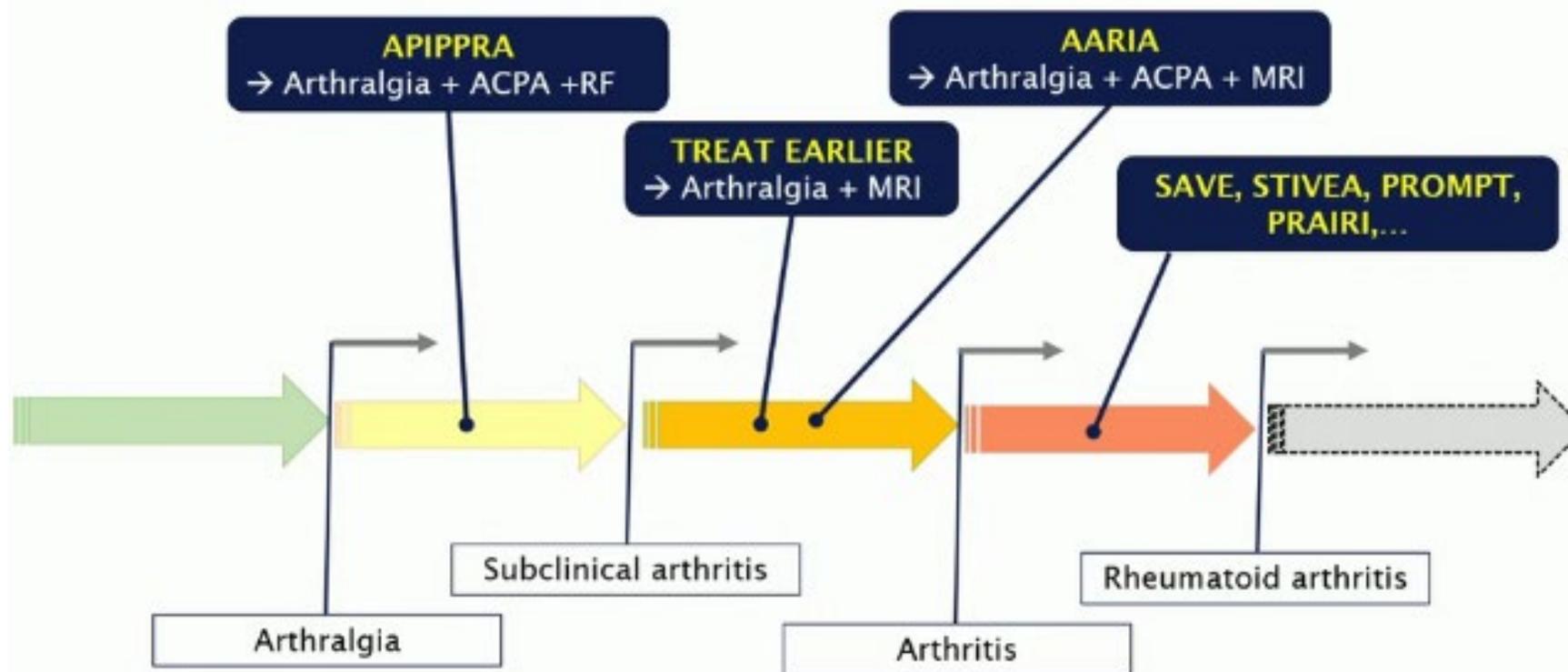
JAK inhibitors: cancer risk

- No significantly increased cancer risk in JAKi treated RA patients

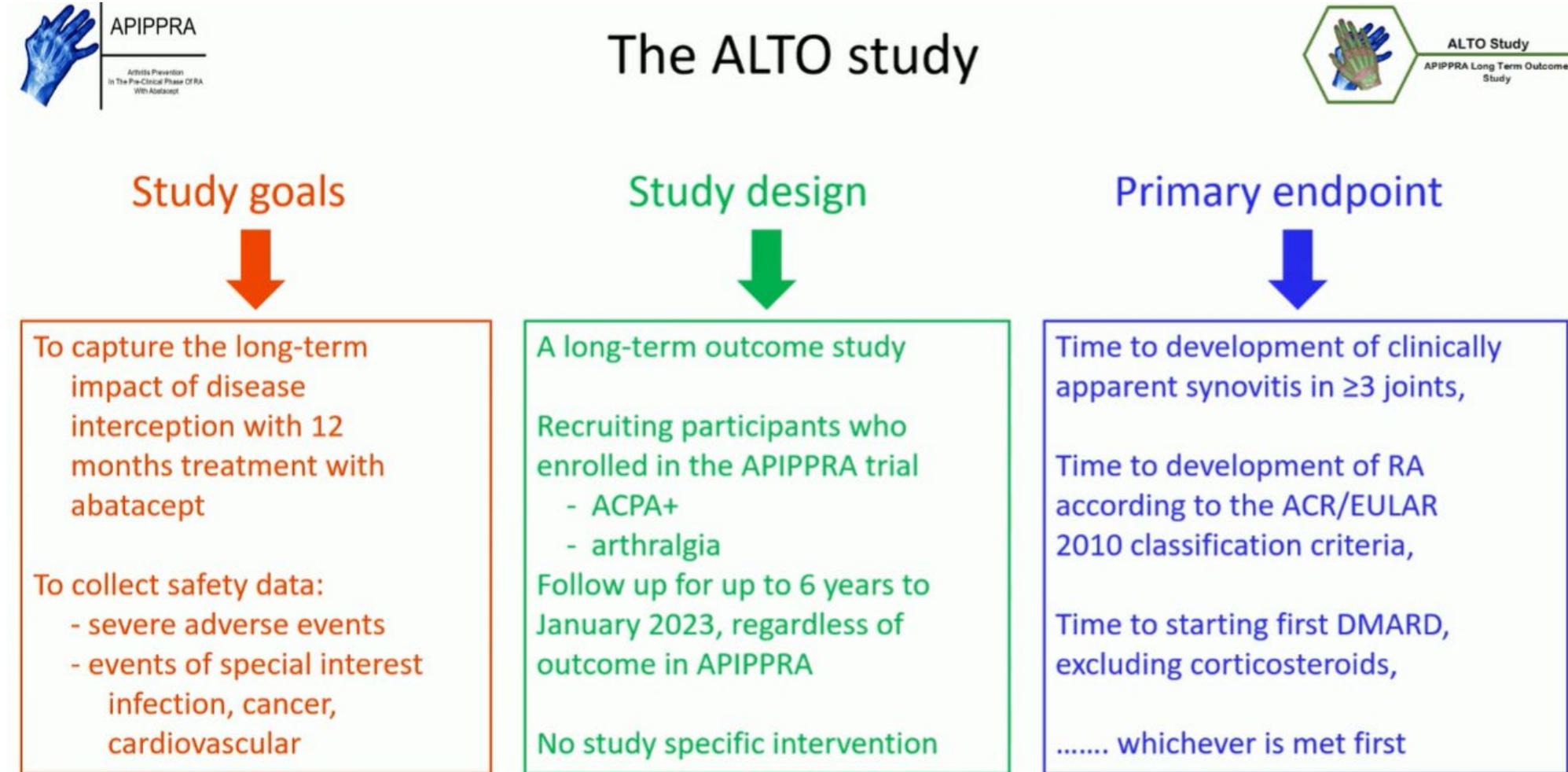


RA prevention

Studies of intervention in pre-RA



RA prevention





Characteristics of the study population



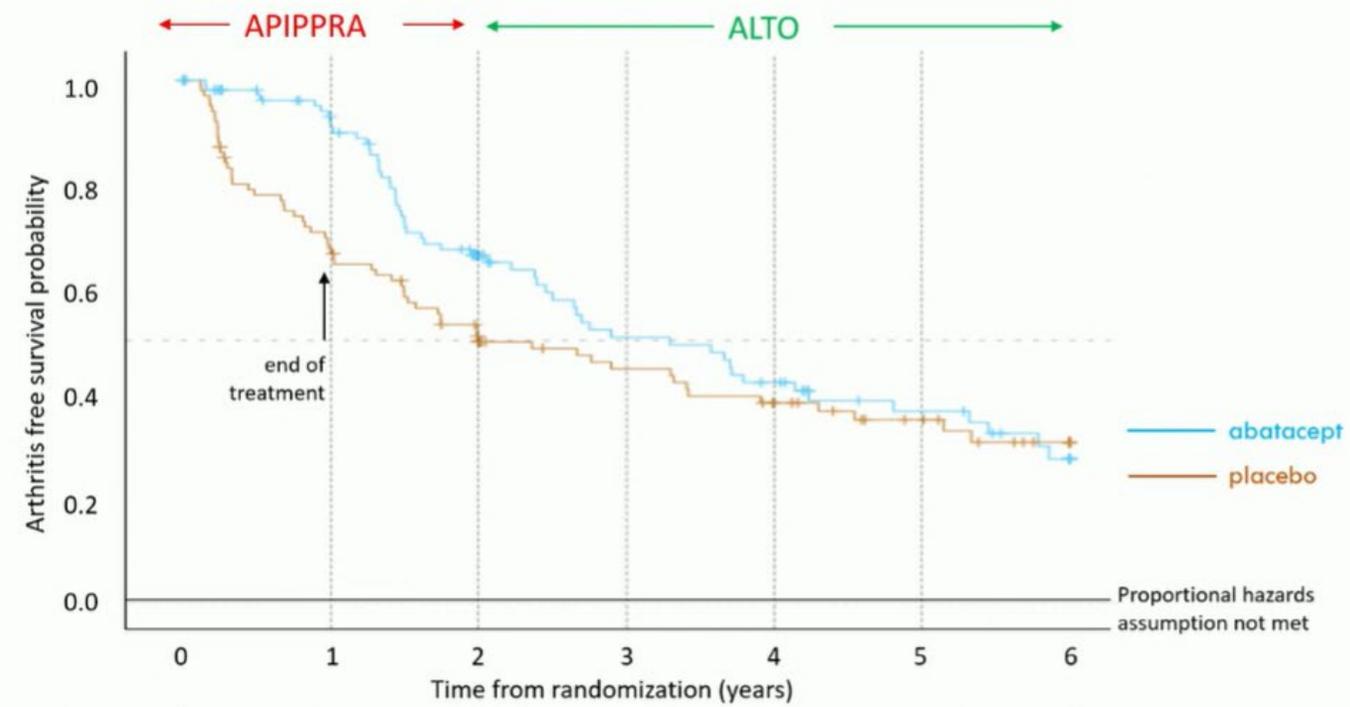
	Randomised in APIPPRA (N=213)			Followed up in ALTO period (N=143)		
	Abatacept N=110	Placebo N=103	Total N=213	Abatacept N=71	Placebo N=72	Total N=143
Age Mean (SD)	48.3 (11.6)	48.8 (10.9)	48.5 (11.2)	47.2 (12.6)	49.1 (9.5)	48.2 (11.2)
Sex						
Male	24% (26)	21% (22)	23% (48)	24% (17)	19% (14)	22% (31)
Female	76% (84)	79% (81)	77% (165)	76% (54)	81% (58)	78% (112)
Smoking						
Current	19% (21)	20% (21)	20% (42)	11% (8)	21% (15)	16% (23)
Previous	40% (44)	46% (47)	43% (91)	45% (32)	43% (31)	44% (63)
Never	41% (45)	34% (35)	38% (80)	44% (71)	36% (26)	40% (57)
		Previous event	YES	31% (22)	32% (23)	31% (45)
		during APIPPRA	NO	69% (49)	68% (49)	69% (90)

Median follow up time was 66 months (Q25-Q75: 54 – 78)

RA prevention



Time to event analysis: arthritis-free survival applying ALTO primary endpoints throughout



		0	1	2	3	4	5	6
abatacept:	No. at risk	110	87	50	35	28	18	10
	Cum no. events		9	32	43	49	52	56
placebo:	No. at risk	103	65	43	34	26	18	10
	Cum no. events		33	49	53	58	60	62

RA prevention



ALTO study: summary of events by arm



	← APIPPRA →		← ALTO →									
	End of treatment Year 1		End of study Year 2		Year 3		Year 4		Year 5		Year 6	
	N	%	N	%	N	%	N	%	N	%	N	%
Placebo	29/103	28.2	39/103	37.9	51/103	49.5	56/103	54.4	59/103	57.3	61/103	59.2
Abatacept	6/110	5.5	27/110	24.5	42/110	38.2	48/110	43.6	51/110	46.4	55/110	50.0
Total Events (%)	35/213 (16%)		66/213 (31%)		93/213 (44%)		104/213 (49%)		110/213 (52%)		116/213 (54%)	
NNT	4		7		9		9		9		11	
Difference in restricted mean survival times p-value			p=0.001		p=0.008		p=0.039		p=0.102		p=0.171	

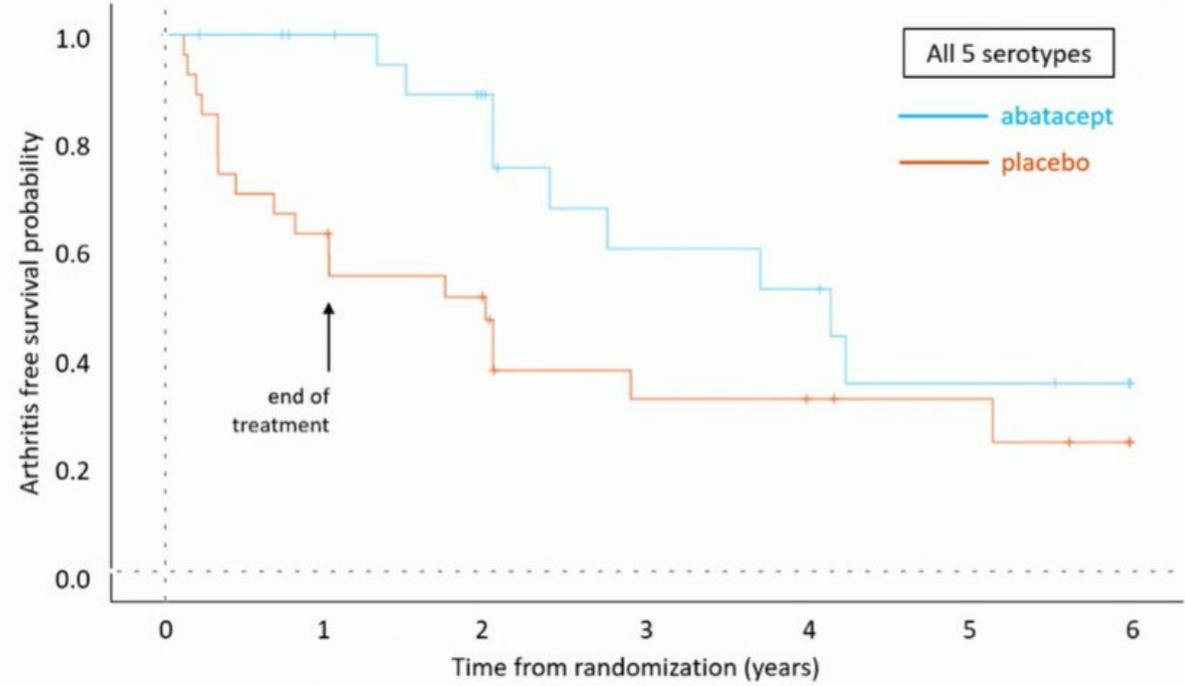
RA prevention



ALTO outcomes stratified by extended serotype



Baseline serotypes (n=5):
 IgM RF
 + IgG ACPA
 + IgA ACPA
 + IgG anti-CarP (carbamyated)
 + IgG AAPA (acetylated)
 at any titer



placebo	No. at risk	27	17	11	6	5	4	2
	Cumulative no. events		10	14	17	17	17	18
abatacept	No. at risk	23	19	13	8	7	4	3
	Cumulative no. events		0	2	6	7	9	9

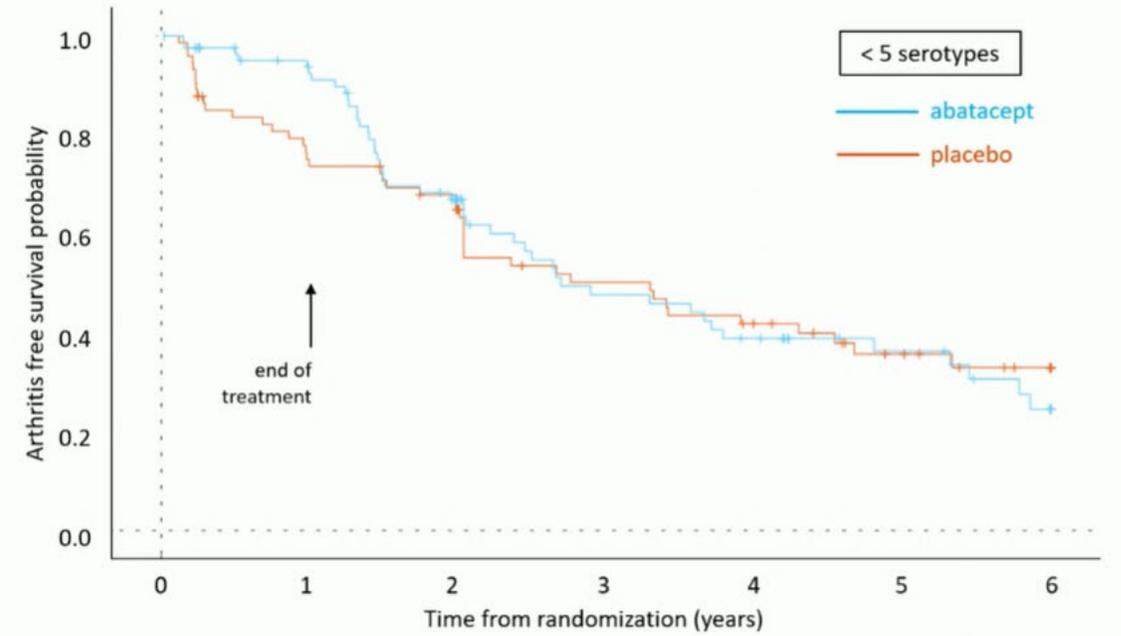
RA prevention



ALTO outcomes stratified by extended serotype



Baseline serotypes (n<5):
 IgM RF
 IgG ACPA
 IgA ACPA
 IgG anti-CarP
 (carbamylated)
 IgG AAPA
 (acetylated)
 in any combination



placebo	No. at risk	76	52	42	34	30	23	15	9	43
	Cumulative no. events		19	25	34	39	42	43	43	43
abatacept	No. at risk	87	70	41	27	21	14	7	48	48
	Cumulative no. events		6	25	36	41	42	46	46	48



ALTO study: summary and conclusions



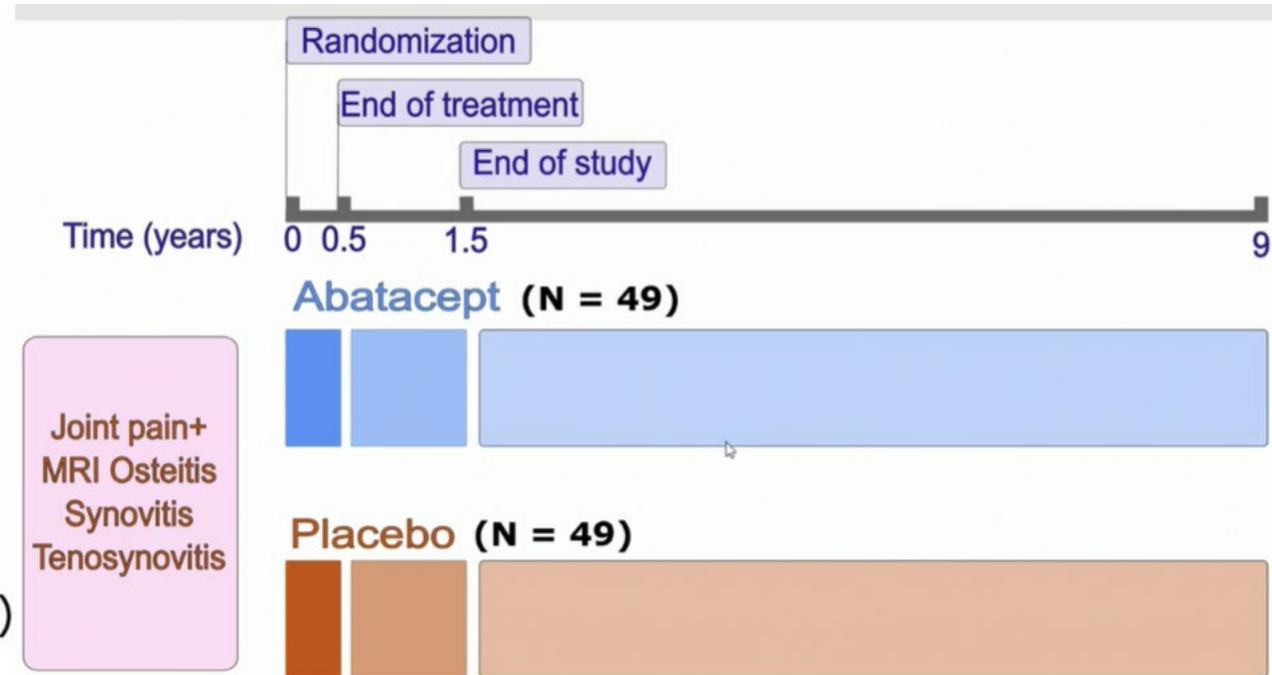
Analysis of the APIPPRA trial long term outcome data indicates that:

- One year of treatment with abatacept delays progression to RA for up to 4 years.
- Individuals at risk of RA with an extended autoantibody profile at baseline:
 - are more likely to progress to RA
 - are more likely to respond to T cell co-stimulation modulation
- Abatacept reduces the symptom burden of at-risk individuals during, but not beyond the treatment period.
- There were no new safety signals.

■ ARIAA Trial

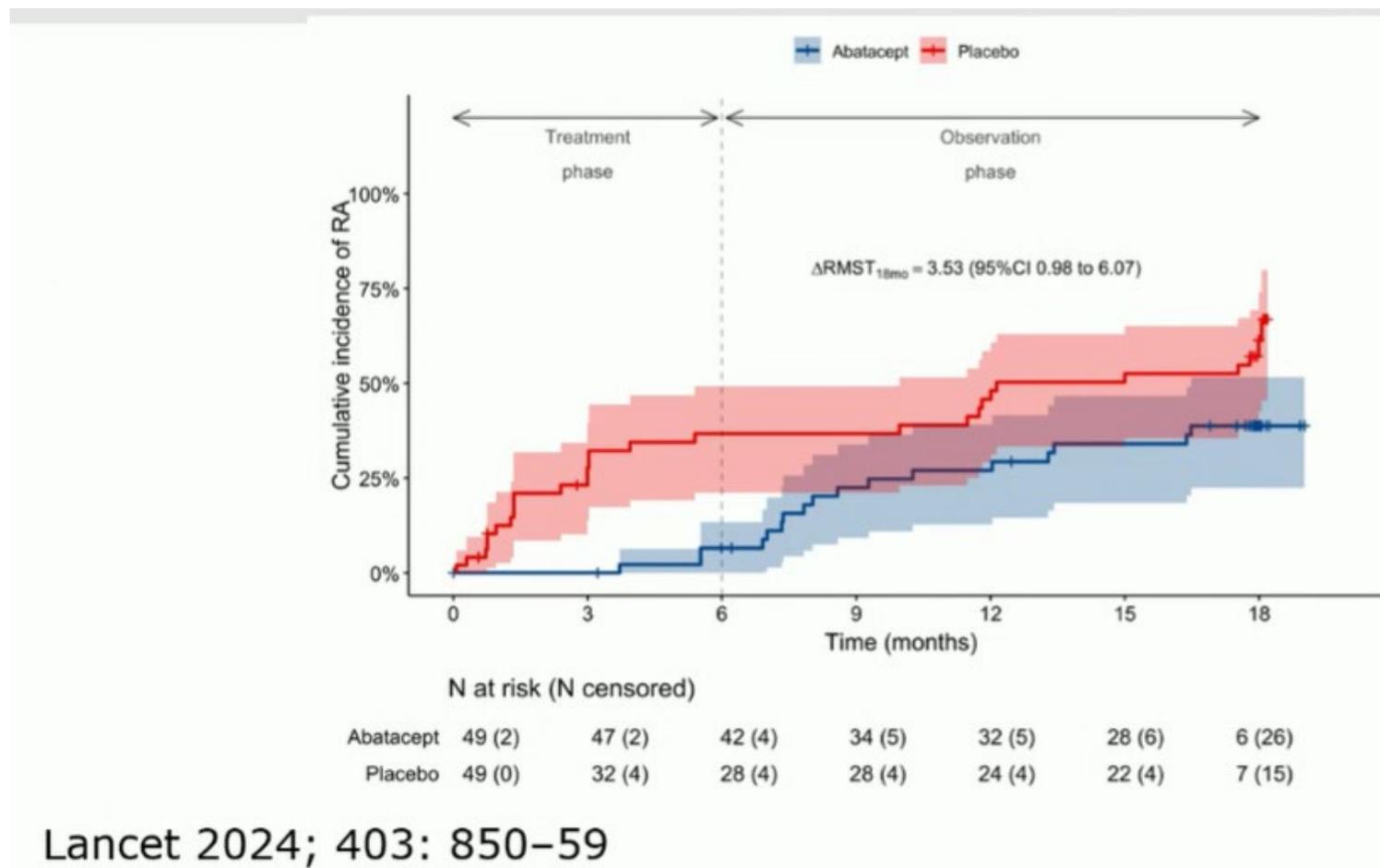
ARIAA Trial Overview:

- ACPA+ individuals with
 - joint pain
 - subclinical inflammation on hand MRI.
- Randomized to a 6-month treatment:
 - Abatacept (125 mg/w sc)
 - Placebo.
- Followed 12 months post-treatment (no therapy)



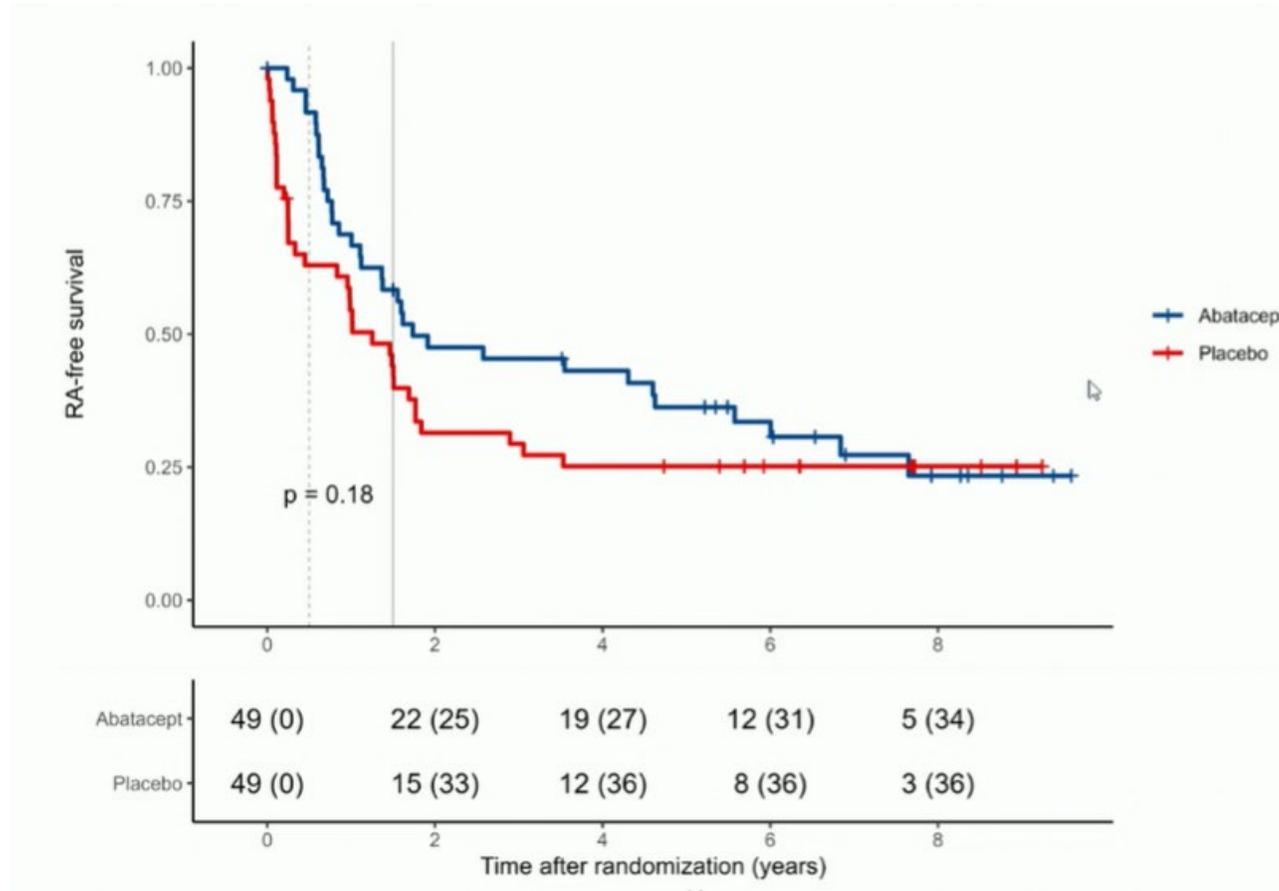
RA prevention

- RA (percentage) over study duration of 18 months



RA prevention

- RA free survival



Long-term durability of methotrexate intervention in
ACPA-positive and ACPA-negative arthralgia patients at increased risk for RA
on disease burden and RA development

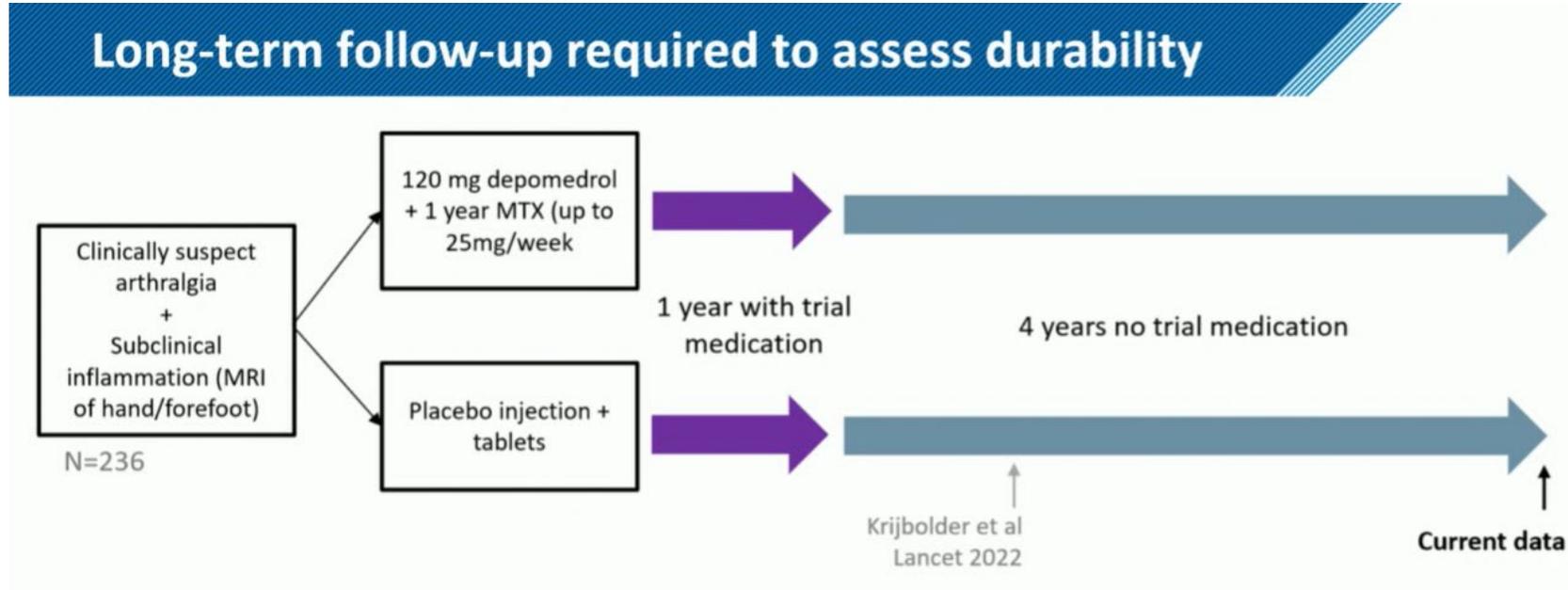
5 year results from the TREAT EARLIER trial

Hanna van Steenberghe, MD PhD
Department of Rheumatology
Leiden University Medical Center
the Netherlands



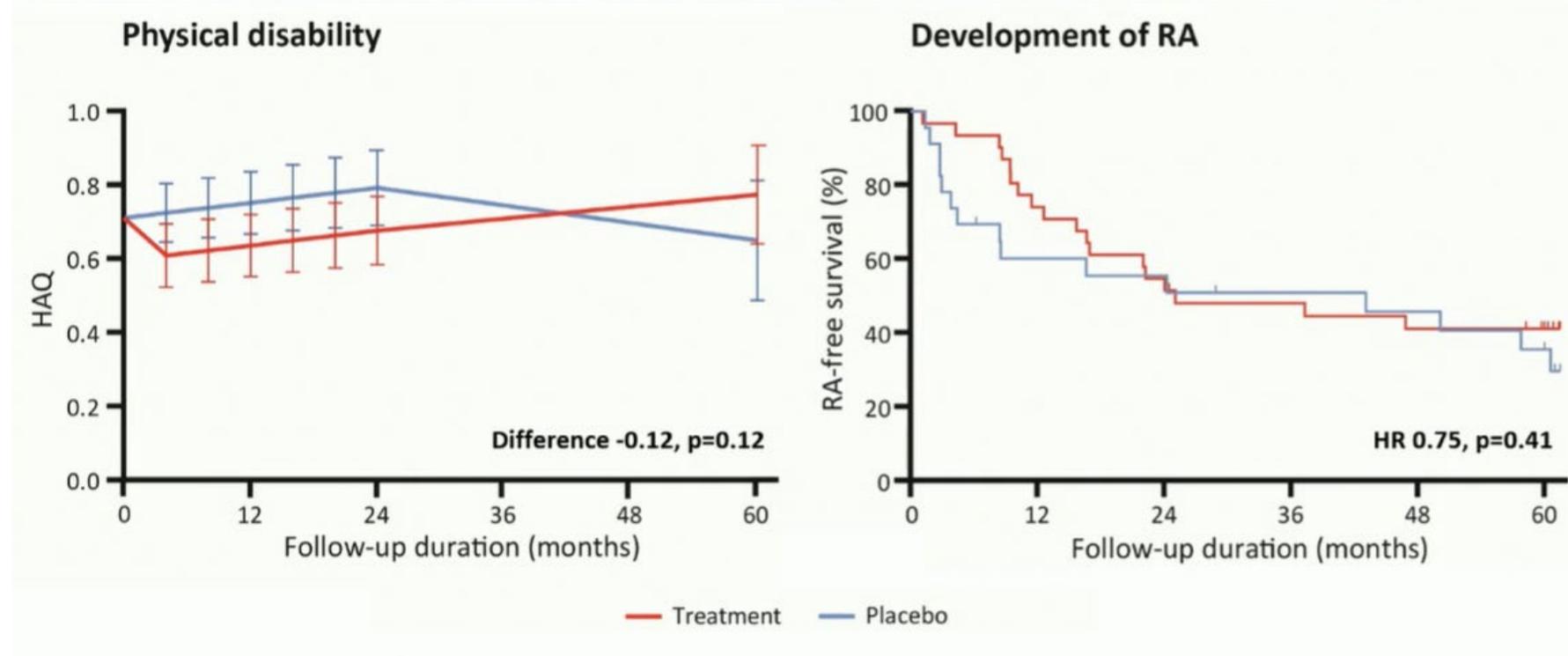
RA prevention

- Treat earlier trial



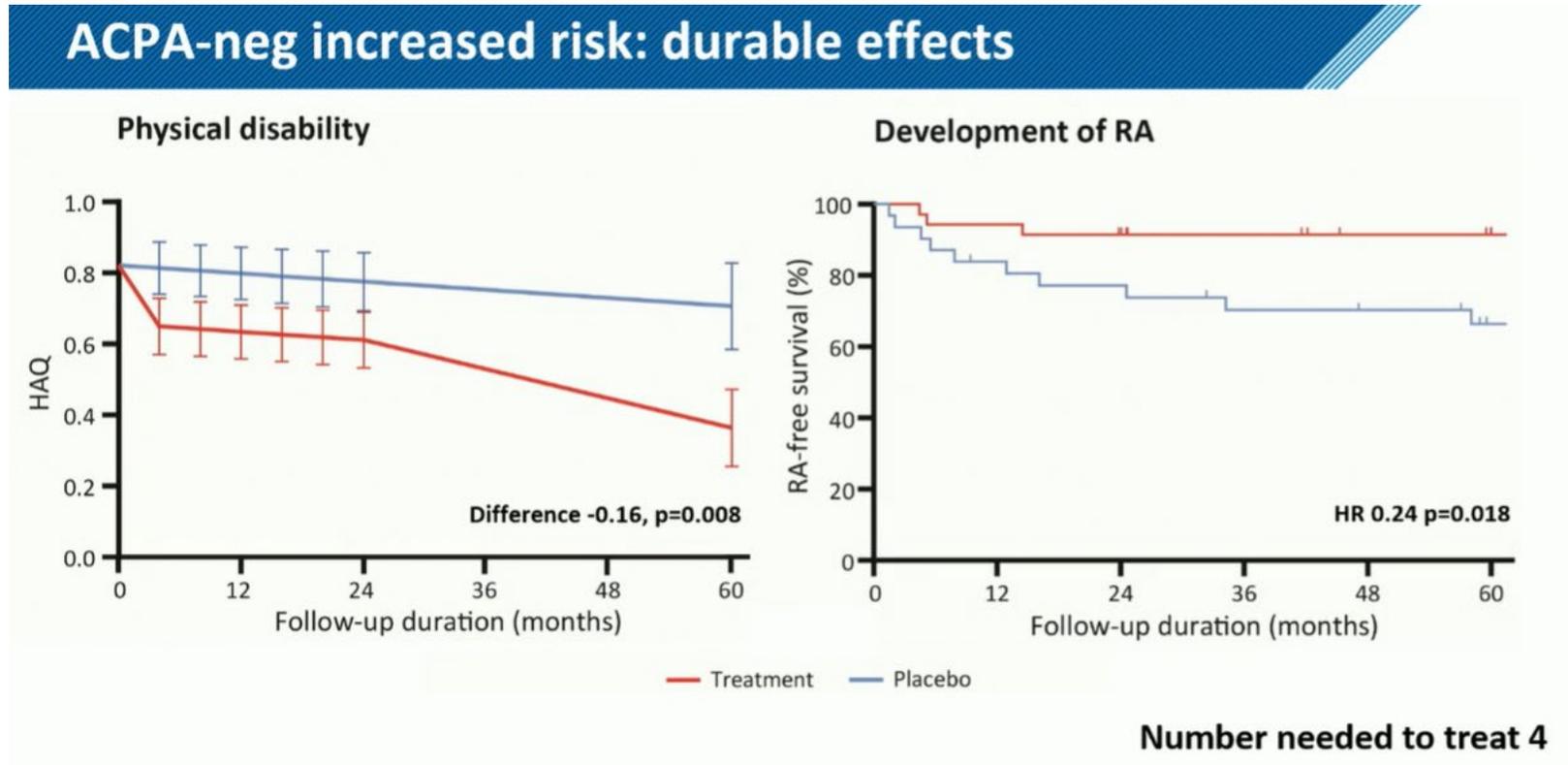
- ACPA+ individuals with increased risk for RA

ACPA-pos increased risk: no durable effects



RA prevention

- ACPA – individuals with increased risk for RA



Conclusions on long-term efficacy

- MTX: different long-term effects on developing ACPA-pos and ACPA-neg RA
- Different treatment strategies needed for ACPA-pos and ACPA-neg at-risk patients
- ACPA-neg increased risk: durable improvement in burden & less RA development



RA prevention

- AIPPRA/ALTO (abatacept)
 - Delay of RA of 4 years, no durable effect
- ARIAA (abatacept)
 - Delay of RA of 5 years, no durable effect
- TREAT EARLIER (MTX)
 - No effect in ACPA + individuals
 - Durable effect in ACPA - individuals



OP0110

Results of a 10-year prospective follow-up of patients with musculoskeletal pain and anti-citrullinated protein antibodies -not every arthritis is rheumatoid arthritis, despite criteria fulfilment.

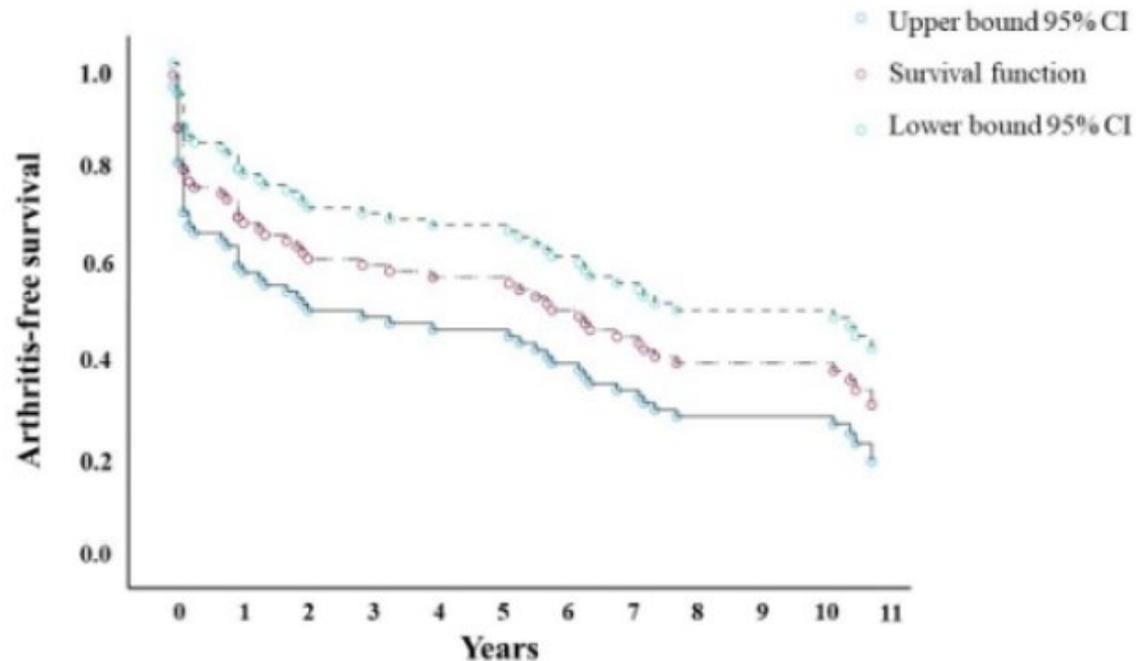
Keywords: Prognostic factors , Autoantibodies

Simon Åhammar* ^{1, 2}, Klara Martinsson ¹, Michael Ziegelasch ^{1, 2}, Jan Cedergren ², Alf Kastbom ^{1, 2}

¹ *Department of Biomedical and Clinical Sciences, Linköping University, Linköping, Sweden* ² *Department of Rheumatology in Östergötland, Linköping, Sweden*

ACPA + arthralgia patients

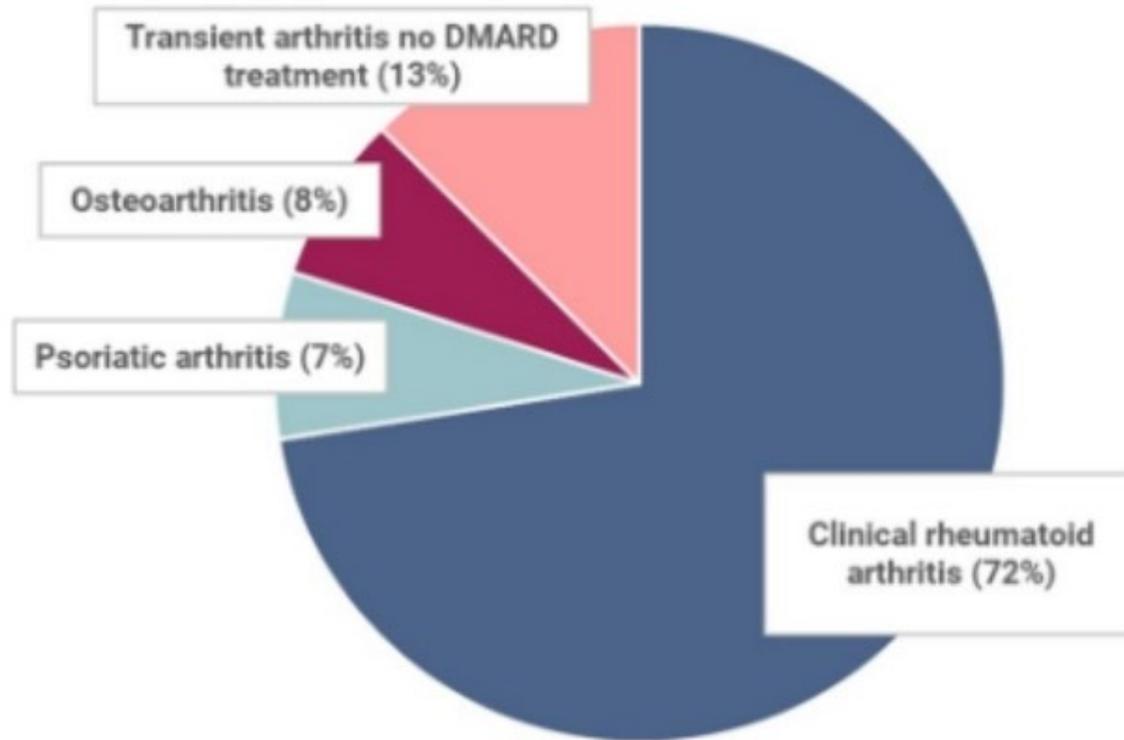
- Single center study in Sweden
- 82 patients with musculoskeletal symptoms and pos. ACPA
- Follow up 10 years
- Primary outcome: arthritis development (by rheumatologist)



60% developed arthritis

ACPA + arthralgia patients

- Not all patients who developed arthritis classified as RA



The impact of social frailty and physical function on laughter frequency in rheumatoid arthritis patients from a multicenter observational study (T-FLAG)

Mochihito Suzuki^{1, 2}, Yoshifumi Ohashi^{3, 4}, Yasumori Sobue⁵, Kenya Terabe¹, Shuji Asai¹, Shiro Imagama¹

¹ Nagoya University Graduate School of Medicine, Department of Orthopedic Surgery and Rheumatology, Nagoya, Japan, ² Jcho Kani Tono Hospital, Department of Orthopedic Surgery, Kani, Japan

³ Aichi Medical University Hospital, Department of Orthopedic Surgery, Nagakute, Japan, ⁴ Yokkaichi Municipal Hospital, Department of Orthopedic Surgery, Yokkaichi, Japan

⁵ Japanese Red Cross Nagoya Daiichi Hospital, Department of Orthopedic Surgery and Rheumatology, Nagoya, Japan

- ◆ Recent studies suggest laughter may reduce stress, boost immunity, and improve mental health (1), yet its role in RA remains understudied.

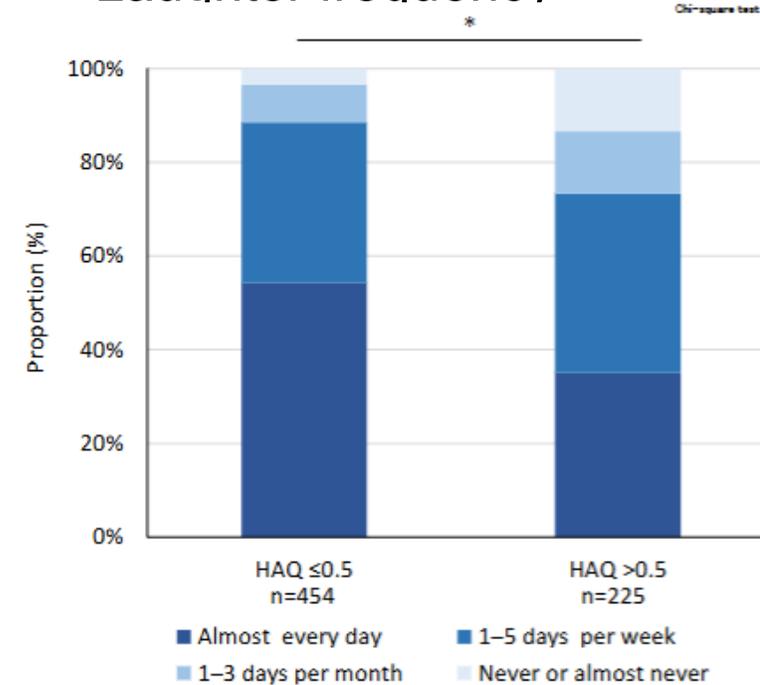
AIM

The aim of this study is to investigate the association between laughter frequency, disease activity, physical function, frailty, and social frailty in RA patients.

CONCLUSIONS

- ◆ This study is the first to thoroughly clarify the associations between laughter frequency and frailty, physical function, and social frailty in patients with RA.
- ◆ The findings indicate that laughter could serve as a beneficial approach to enhancing the QOL for RA patients. Beyond managing disease activity, integrated interventions that address physical and social dimensions may promote more frequent laughter, thereby supporting QOL improvements.

Laughter frequency



Summary

- CV risk in RA modifiable with GLP1 agonists
- New signal transduction inhibitors with improved CV risk profile
- Cancer risk in RA treated with JAKi not increased in real-world studies

- RA prevention studies: no prevention of ACPA + RA possible
- RA prevention: exception ACPA – RA: durable effect of MTX/GC
- Prognosis of ACPA + arthralgia: 50% do not develop arthritis requiring DMARD Tx

- Regular laughter is good for the quality of life



Vielen Dank für die Aufmerksamkeit

