



EUROPEAN MEDICINES AGENCY  
SCIENCE MEDICINES HEALTH

# EMA Paediatric Rheumatology Expert Meeting 17 November 2010

---

Overview of PIPs  
Overview of answers from experts to EMA questions

Presented by: Richard Veselý  
Scientific administrator, Paediatric Medicines, Human Medicines Special Areas

An agency of the European Union





## Question 1 :

### Name for the condition for adults and children

---

- Autoimmune arthritis
- Autoinflammatory childhood arthritis
- Chronic childhood arthritis
- Juvenile idiopathic arthritis
- Chronic autoimmune arthritis in childhood
- Autoimmune/autoinflammatory arthritis
- Chronic inflammatory arthritis
- Chronic idiopathic arthritis



## Question 1 :

### Name for the condition for adults and children

---

- Autoimmune arthritis
- Autoinflammatory **childhood** arthritis
- Chronic **childhood** arthritis
- **Juvenile idiopathic arthritis**
- Chronic autoimmune arthritis **in childhood**
- Autoimmune/autoinflammatory arthritis
- Chronic inflammatory arthritis
- Chronic idiopathic arthritis



## Question 1 :

### Name for the condition for adults and children

---

- Autoimmune arthritis
- Autoinflammatory **childhood** arthritis
- Chronic **childhood** arthritis
- **Juvenile idiopathic arthritis**
- Chronic autoimmune arthritis **in childhood**
- Autoimmune/autoinflammatory arthritis
- Chronic **inflammatory** arthritis
- Chronic idiopathic arthritis



## Question 1 :

### Name for the condition for adults and children

---

- Autoimmune arthritis
- Autoinflammatory childhood arthritis
- Chronic childhood arthritis
- Juvenile idiopathic arthritis
- Chronic autoimmune arthritis in childhood
- Autoimmune/autoinflammatory arthritis
- Chronic inflammatory arthritis
- Chronic idiopathic arthritis



## Question 1 :

### Name for the condition for adults and children

---

- Autoimmune arthritis
- Autoinflammatory childhood arthritis
- Chronic childhood arthritis
- Juvenile idiopathic arthritis
- Chronic autoimmune arthritis in childhood
- Autoimmune/autoinflammatory arthritis
- Chronic inflammatory arthritis
- Chronic idiopathic arthritis



## Question 1 :

Name for the condition for adults and children

---

- Autoimmune arthritis
- Autoinflammatory childhood arthritis
- Chronic childhood arthritis
- Juvenile idiopathic arthritis
- Chronic autoimmune arthritis in childhood
- Autoimmune/autoinflammatory arthritis
- Chronic inflammatory arthritis
- Chronic idiopathic arthritis



## Question 1 :

Name for the condition for adults and children

---

Proposed conclusions (options to select from):

- Chronic arthritis
- Chronic autoimmune/autoinflammatory arthritis
- Autoimmune/autoinflammatory arthritis
- Chronic idiopathic arthritis





## Question 2 – age subsets

---

- Agreed in general
- There are children below 2 years
- Especially in sJIA
- Treatment can be altering the future course
- At least PK in sJIA in 1-2 year olds
- Special concerns for B-cell depleting agents, JAK inhibitors etc.



## Question 2 – age subsets

---

### Proposed conclusions:

- Move the age limit for waiver to less than 1 year
- Don't request specific studies in smallest children
- In sJIA (and autoinflammatory disorders) small PK study in youngest children
- For B-cell depleting agents and novel pathways individual approach to waiver depending on mechanism of action and expected adverse effects



## Question 3 – Target populations

---

ACR 2010 guidelines

Presentation by Nicola Ruperto



## Question 3 – Target populations

---

### ACR 2010 guidelines:

1. Arthritis of 4 or fewer joints (no systemic, SI or LS)
2. Arthritis of 5 or more joints (no systemic, SI or LS)
3. Active SI or LS arthritis
4. Systemic with active systemic features
5. Systemic with active arthritis without systemic features

Disease activity, previous treatment and features of poor prognosis define more precisely the treatment group



## Question 3 – Target populations

---

Agreed in majority



## Question 3 – Target populations

---

Agreed in majority

### Concerns:

Wait until ILAR revision based on biological markers to use homogeneous populations



## Question 3 – Target populations

---

Agreed in majority

### Concerns:

Wait until ILAR revision based on biological markers to use homogeneous populations

Psoriatic arthritis is missing



## Question 3 – Target populations

---

Agreed in majority

### Concerns:

Wait until ILAR revision based on biological markers to use homogeneous populations

Psoriatic arthritis is missing

Both systemic should be merged to one group





## Question 3 – Target populations

---

Agreed in majority

### Concerns:

Wait until ILAR revision based on biological markers to use homogeneous populations

Psoriatic arthritis is missing

Both systemic should be merged to one group

SI and LS how to define/assess?



## Question 3 – Target populations

---

Agreed in majority

### Concerns:

Wait until ILAR revision based on biological markers to use homogeneous populations

Psoriatic arthritis is missing

Both systemic should be merged to one group

SI and LS how to define/assess?

Number of joints does not define severity (oligoarticular treatment resistant). Better definition of target populations based on severity



## Question 3 – Target populations

---

Agreed in majority

### Concerns:

Wait until ILAR revision based on biological markers to use homogeneous populations

Psoriatic arthritis is missing

Both systemic should be merged to one group

SI and LS how to define/assess?

Number of joints does not define severity (oligoarticular treatment resistant). Better definition of target populations based on severity

Statistical concerns



# Question 4 – Is systemic without systemic more like poly or more like systemic?

---

**Systemic without systemic can be merged with poly (6 votes)**

- past clinical trials
- retrospective databases don't show difference in response to treatment



# Question 4 – Is systemic without systemic more like poly or more like systemic?

---

## **Systemic without systemic can be merged with poly (6 votes)**

- past clinical trials
- retrospective databases don't show difference in response to treatment

## **Systemic without systemic cannot be merged with poly (7 votes)**

- different response to treatment
- reactivation of systemic features after years
- genetic difference
- different pathogenic mechanisms



# Question 4 – Is systemic without systemic more like poly or more like systemic?

---

## **Systemic without systemic can be merged with poly (6 votes)**

- past clinical trials
- retrospective databases don't show difference in response to treatment

## **Systemic without systemic cannot be merged with poly (7 votes)**

- different response to treatment
- reactivation of systemic features after years
- genetic difference
- different pathogenic mechanisms

## **Maybe yes, maybe not - depends on time... (1 vote)**



## Question 5 – Does systemic with systemic need to be further divided?

---

General agreement – no.

In addition systemic without systemic should be merged with systemic with systemic



## Questions 3,4,5 – Target populations

---

### Possible conclusions:

- Accept ACR treatment groups as target populations for PIPs
- Merge both systemics into one group
- Do always analysis for ILAR subtypes
- Include severity and prognostic features
- Specify in the PIP target population for each treatment
- Revise target populations after biologic background of different “subtypes” is well known and reflected in JIA classification





## Question 6 – Non clinical development

---

Complex and divergent opinions  
(clinicians admitting borderline expertise)

- Mostly support for doing juvenile animal studies
- Not in well known classes
- Use proper animals of proper age
- Avoid studies that are not necessary



## Question 6 – Non clinical development

---

Possible conclusions:

Summarise answers from experts for  
the Non clinical working group of the PDCO

Search if “standard” approach for future is  
possible



## Question 7 – PK/PD

---

### **Options:**

1. Separate full PK trial
2. PK/PD as part of efficacy study (after adult studies)
3. Modelling and simulation with sparse sample validation
4. Complete extrapolation



## Question 7 – PK/PD

---

### Options:

1. Separate full PK trial
2. PK/PD as part of efficacy study (after adult studies)
3. Modelling and simulation with sparse sample validation
4. Complete extrapolation

In general options 2 and 3 supported, option 4 excluded



## Question 7 – PK/PD

---

### Options:

1. Separate full PK trial
2. PK/PD as part of efficacy study (after adult studies)
3. Modelling and simulation with sparse sample validation
4. Complete extrapolation

In general options 2 and 3 supported, option 4 excluded

Divergent opinion: Option 1 – because results from pivotal phase (Option 2) may affect too much design and schedule for efficacy trial



## Question 7 – PK/PD

---

Presentations by Nicola Ruperto and Fabrizio De Benedetti



## Question 7 – PK/PD

---

### Possible conclusions:

1. Separate full PK trial **in new molecules/targets**
  2. PK/PD as part of efficacy study
  3. Modelling and simulation with sparse sample validation
- } If product/class is better known



## Question 8 – Study design for future

---

- Randomised controlled trials usually not feasible
- Randomised withdrawal design accepted and used successfully
- ACR30 used as target for efficacy evaluation
- Different treatments not compared
- Long term safety/efficacy not addressed in trials
- Treatment withdrawal in remission/inactivity not addressed





## Question 8 – Study design for future

---

Do we accept current practise unchanged for future trials?



## Question 8 – Study design for future

---

Do we accept current practise unchanged for future trials?

YES.....4

NO.....6



## Question 8 – Efficacy/safety evaluation for future

---

- Require always superiority trial for every first in the class
- Only PK/PD studies in new molecules belonging to well known classes
- Spare children from trials, extrapolate efficacy from adults
- Use post marketing studies to collect efficacy data in large populations
- Grant conditional authorisation based on PK studies and extrapolation followed by post marketing studies to confirm efficacy and safety and leading to final marketing authorisation
- Always collect data on efficacy levels higher than ACR30 and on remission
- Conduct comparative trials



## Question 9 – Extrapolation

---

Presentation Agnes Saint Raymond



## Question 8 – Efficacy/safety evaluation for future

---

- Require always superiority trial for every first in the class
- Only PK/PD studies in new molecules belonging to well known classes
- Spare children from trials, extrapolate efficacy from adults
- Use post marketing studies to collect efficacy data in large populations
- Grant conditional authorisation based on PK studies and extrapolation followed by post marketing studies to confirm efficacy and safety and leading to final marketing authorisation
- Always collect data on efficacy levels higher than ACR30 and on remission
- Conduct comparative trials
- Require conduct of treatment withdrawal in remission trials in the PIP



# Pharmacovigilance

---

## Presentation of Dirk Mentzer



# Pharmacovigilance

---

Presentation of Nico Wulffraat/PRINTO on registries



# Question 10 – Long term risk/benefit evaluation

---

## **What needs to be collected:**

- Co-morbidities
- Medications, history, reason for discontinuation
- Growth, Tanner score, fertility
- Disease activity
- Adverse events





# Question 10 – Long term risk/benefit evaluation

---

## **What needs to be collected:**

*Adverse events*

### **Focus on:**

- Infections (incl. TB)
- Autoimmune diseases (Crohn, uveitis...)
- Demyelination
- Malignancies
- Metabolic syndrome, cardiovascular diseases...



# Question 10 – Long term risk/benefit evaluation

---

**How long?**



# Question 10 – Long term risk/benefit evaluation

---

**How long?**

Lifelong...



# Question 11 – Special JIA considerations

---

Which of the following should be addressed in the PIP:

- Bone erosions
- Osteoporosis
- Growth
- Uveitis
- Vascular involvement
- Sexual maturation
- Social impact



## Question 12 – Uveitis

---

- Diverse opinions if uveitis should be studied within JIA trials
- Separate studies of uveitis supported if feasible.
- Separate patient group not supported



## Question 13 – Future collaborations

---

- Do you think that standardisation of PIP requirements for new treatments in JIA is possible/desirable?
- Would you be willing to continue in efforts to standardise PIPs for JIA?
- Are facilities for videoteleconferencing or virtual teleconference meetings available for you?



## Question 13 – Future collaborations

---

- Do you think that standardisation of PIP requirements for new treatments in JIA is possible/desirable?
- Would you be willing to continue in efforts to standardise PIPs for JIA?
- Are facilities for videoteleconferencing or virtual teleconference meetings available for you?
- **UNISONO YES FOR ALL!**



## Question 13 – Future collaborations

---

Thank you!!!...

...and stay tuned...