



ORAL PRESENTATION

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# The risk and nature of flares in juvenile idiopathic arthritis: results from the reACCh-Out cohort

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## Introduction

Accurate description of the risk and nature of flares will help counsel families when JIA is controlled and when considering discontinuing treatment.

## Objectives

To describe the probability and characteristics of flares across JIA categories in an inception cohort of Canadian children treated with a contemporary approach.

## Methods

We studied children diagnosed with JIA between 2005 and 2010 who had at least one visit with inactive disease while being prospectively followed in the Research in Arthritis in Canadian Children emphasizing Outcomes (ReACCh-Out) cohort. They received usual pediatric rheumatology care at 16 Canadian centres. Flare was defined as any recurrence of disease manifestations after attaining

inactive disease (no active joints, no extraarticular manifestations and a physician global assessment <10mm). Flares were considered major if they required re-initiation or intensification (a new drug was started) of anti-rheumatic treatment. Risk of flare was calculated with Kaplan-Meier survival methods starting at the time of attainment of inactive disease, and at the time of discontinuing all treatment.

## Results

Of 1492 children recruited in ReACCh-Out, 1128 had at least one visit with inactive disease. Median follow-up was 24 months (IQR 12, 39) after attaining inactive disease. A total of 1,179 flares were observed in 532 patients; 55% of all flares were major flares. The cumulative probability of flare was 25%, 42% and 60% within 6, 12 and 24 months after attaining inactive disease, respectively. By 24 months the risk varied from 49% for systemic JIA to 72% for

**Table 1 Cumulative probability of flare within 6 and 12 months of stopping treatment**

| JIA category                 | Subjects stopping treatment / total | Risk within 6 months (%) |             | Risk within 12 months (%) |             |
|------------------------------|-------------------------------------|--------------------------|-------------|---------------------------|-------------|
|                              |                                     | Any flare                | Major flare | Any flare                 | Major flare |
| Systemic arthritis           | 37 / 66                             | 11                       | 3           | 11                        | 3           |
| Psoriatic arthritis          | 44 / 75                             | 12                       | 12          | 15                        | 15          |
| Oligoarthritis               | 318 / 481                           | 15                       | 12          | 32                        | 26          |
| Undifferentiated arthritis   | 60 / 111                            | 24                       | 13          | 28                        | 18          |
| Enthesitis-related arthritis | 77 / 152                            | 29                       | 21          | 45                        | 33          |
| RF-negative polyarthritis    | 85 / 209                            | 25                       | 20          | 45                        | 40          |
| RF-positive polyarthritis    | 4 / 34                              | -                        | -           | -                         | -           |

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RF-positive polyarthritis. 625 patients discontinued all treatment. The probability of flares after stopping treatment is shown in the Table (except for RF-positive polyarthritis because only 4 subjects discontinued treatment). Table 1

### Conclusion

Flares after attaining inactive disease were common in this JIA cohort, and the risk was lowest for systemic JIA and highest for RF-positive polyarthritis. Flares after stopping treatment were uncommon in systemic JIA, but occurred in up to 45% of children within one year in other JIA categories. About half the flares required intensification or re-initiation of treatment.

### Disclosure of interest

None declared.

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