

# A digitalized flow chart for identification of rare autoinflammatory diseases in childhood

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## Executive summary

Autoinflammatory diseases (AID) are characterized by current inflammatory attacks with fever, rash, serositis, arthritis, lymphadenopathy, uveitis, renal failure and nervous system involvement depending on diseases severity. Interleukin-1 $\beta$  (IL-1 $\beta$ ) is often a key mediator in the disease. AID are often rare and differential diagnosis can be difficult. Dr. Gattorno and colleagues have published 5 disease algorithms to help clinicians identifying AID in children<sup>1-2</sup>. Based on these publications, Novartis has developed an App named to support physicians' clinical practice by guiding them digitally through relevant diagnose algorithms; in order to identify AID key symptoms and to differentiate certain disease types. In addition a search function has been integrated to locate centers of excellence.



## Main functionalities

**AIDeA** (AutoInflammatory Diseases electronic Algorithms) is an App (iOS & Android) developed by Novartis that harbors 5 digitilized disease algorithms initially published by Dr. Marco Gattorno and colleagues on Italian scientific journals<sup>1-2</sup> and then published on Best Practice & Research Clinical Rheumatology<sup>3</sup>.

The App presents 3 main functionalities:

- 1) Disease identification tool
- 2) Search function for expert reference centers (from countries where the App is available)
- 3) Literature section

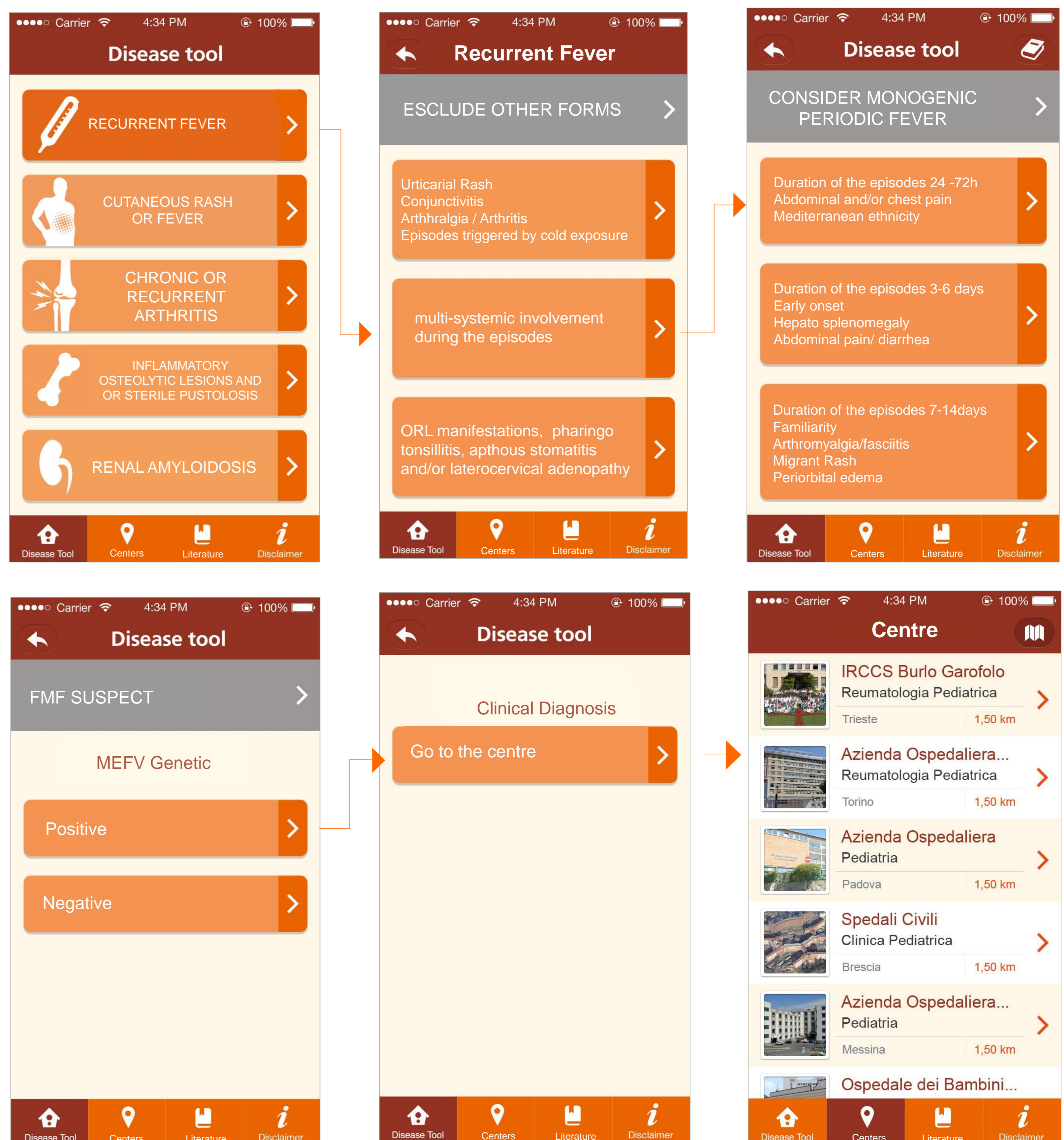
The Italian version of the **AIDeA** App is available on the iOS and Android platform since January 2015. This App has since proven to be a valid tool to avoid misdiagnosis or no-diagnosis in clinical practice.

The App is currently only available in Italian but has the possibility of multilingual deployment. The App also has a web-based maintenance system for Content Management and a Back Office.

## A valuable tool for paediatricians

The **AIDeA** App was presented by Dr Gattorno and his Team at the most relevant Italian paediatric congresses.

The **AIDeA** App is downloadable for free from the IOS and ANDROID platform and the Italian version has already been downloaded by 170 rare care physicians. This digitalised algorithm supports physicians to identify specific rare autoinflammatory diseases starting from the first typical symptoms and patient consultation. For each identified rare autoinflammatory disease, paediatricians will also find a local expert center and relevant scientific publications.



## Conclusions and next steps

- **AIDeA** provides an easy access to a published disease algorithm, thereby supporting physicians in their clinical practice to identify patients with rare auto-inflammatory diseases and to decrease misdiagnosis.
- The **AIDeA** App supports physicians to locate and liaise with local expert centres.
- An updated, multi-languages version of the **AIDeA** App is under development.

## References

1. R. Caorsi, M. Gattorno; Rivista di Immunologia e Allergologia Pediatrica 06 (2011) 1:11
2. S. Federici, M. Gattorno; Rivista di Immunologia e Allergologia Pediatrica 05.06 (2013) 1:10
3. S. Federici, M. Gattorno; Best Practice & Research Clinical Rheumatology 28 (2014) 263:276

External partner for digital implementation: Media for Health

