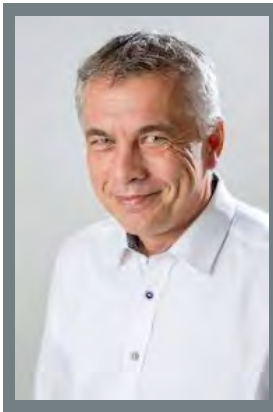




Chronic Urticaria: What I Wish my Patients Knew

Dr. Marcus Maurer

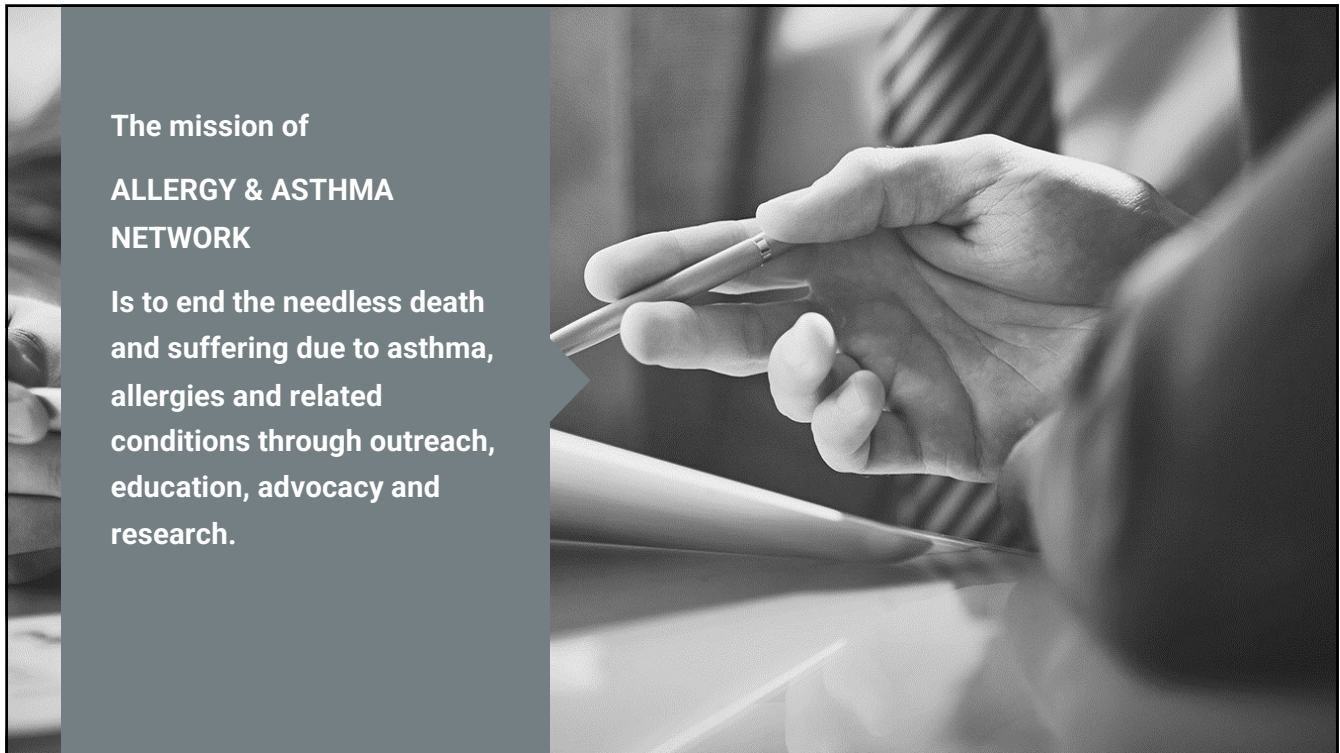
1



Marcus Maurer

*Charité - Universitätsmedizin Berlin, Institute of Allergology,
Berlin, Germany*

2



3

Disclosure of Significant Relationships with Commercial Companies and Organizations

Marcus Maurer is or was a Speaker and/or advisor for Allakos, Almirall Hermal, Amgen, ArgenX, Bayer, BioCryst, CellDex, Dyax, FAES, Genentech, Leo, Lilly, Merckle Recordati, Kyowa Kirin, Moxie, MSD, Novartis, Pharvaris, Riemser, Sanofi Aventis, Shire, Takeda, Tribute Pharmaceuticals, UCB, and Uriach.

4



5



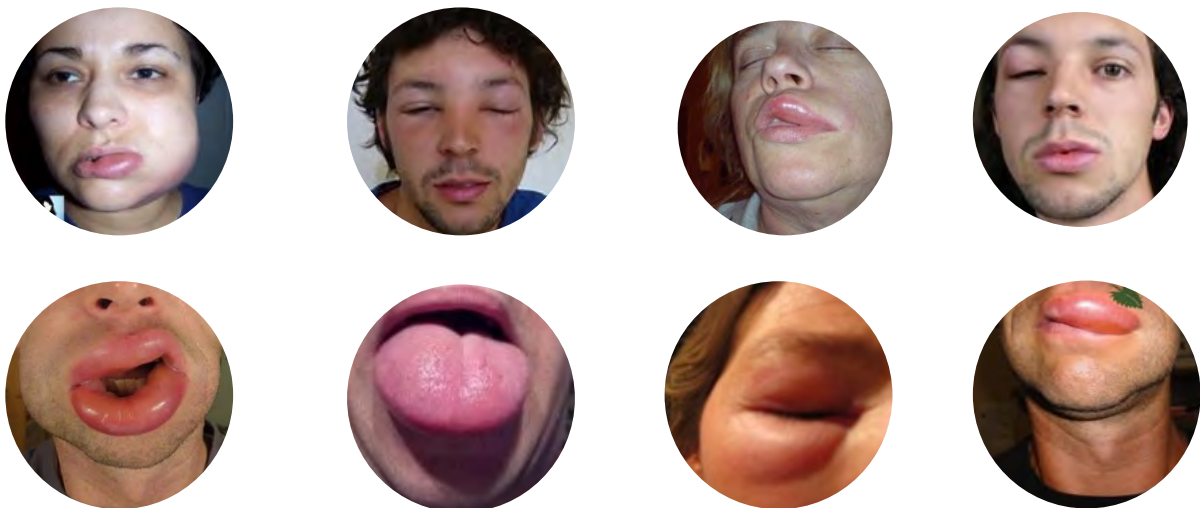
6

What is Urticaria?



7

What is Urticaria?



8

What is a wheal?

Elevated
You can feel it when you touch it

Red
But can be white at the beginning

Short-lived
Stays for a couple of hours

Itchy
You want to rub it



9

More examples



10



What is angioedema?

Short-lived
Hours to a few days


Swelling
Feels and looks bigger

Not dangerous
Lips/Eyes > Hands/Feet > Tongue

Feel and look vary
Itchy, painful or not; red or not

11

More examples

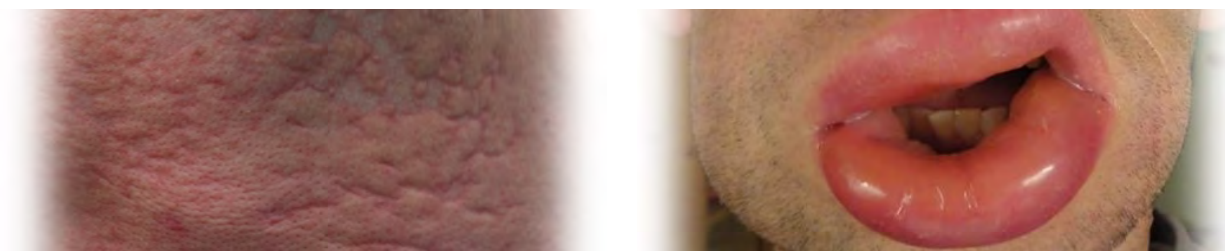


The 'More examples' section contains three photographs illustrating facial angioedema. The first photo shows a man's face with significantly swollen lips and some facial redness. The second photo is a close-up of a tongue that is severely swollen and protrudes from the mouth. The third photo shows a woman's face with noticeable swelling around her eyes, making them appear closed or heavily puffy.

12

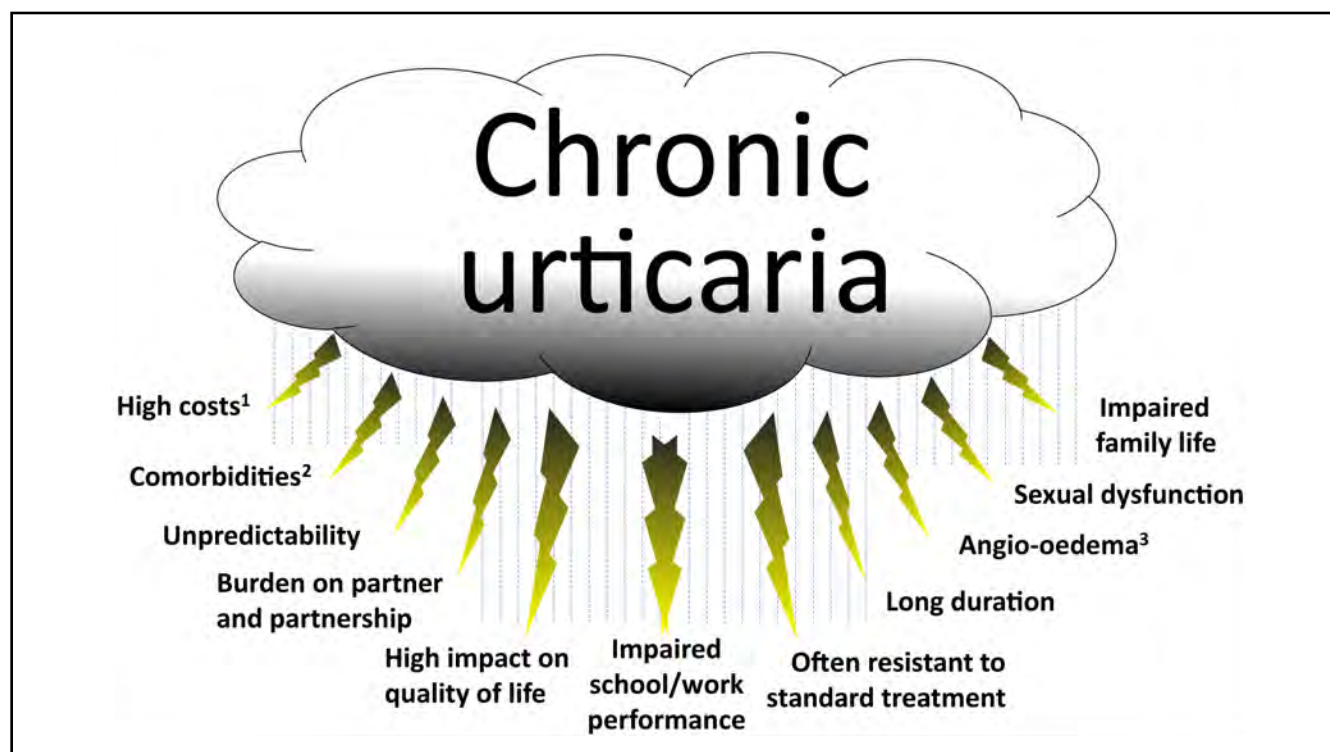
Chronic Urticaria

Wheals, angioedema, or both for > 6 weeks



Itchy Wheals and/or Angioedema

13



14

10 types of Chronic Urticaria

Spontaneous Urticaria

Due to known cause

Due to unknown cause

Physical Urticaria

Symptomatic dermographism

Cold Urticaria

Delayed pressure urticaria

Solar urticaria

Heat urticaria

Vibratory urticaria

Cholinergic urticaria

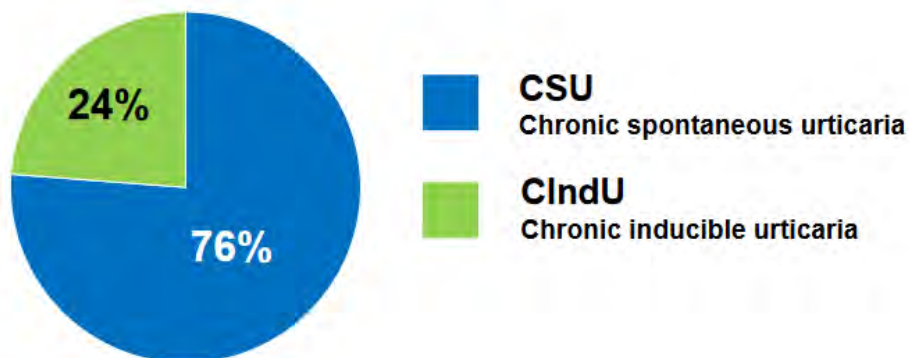
Contact urticaria

Aquagenic Urticaria

Zuberbier et al., *Allergy* 2014; 69; 868-887

15

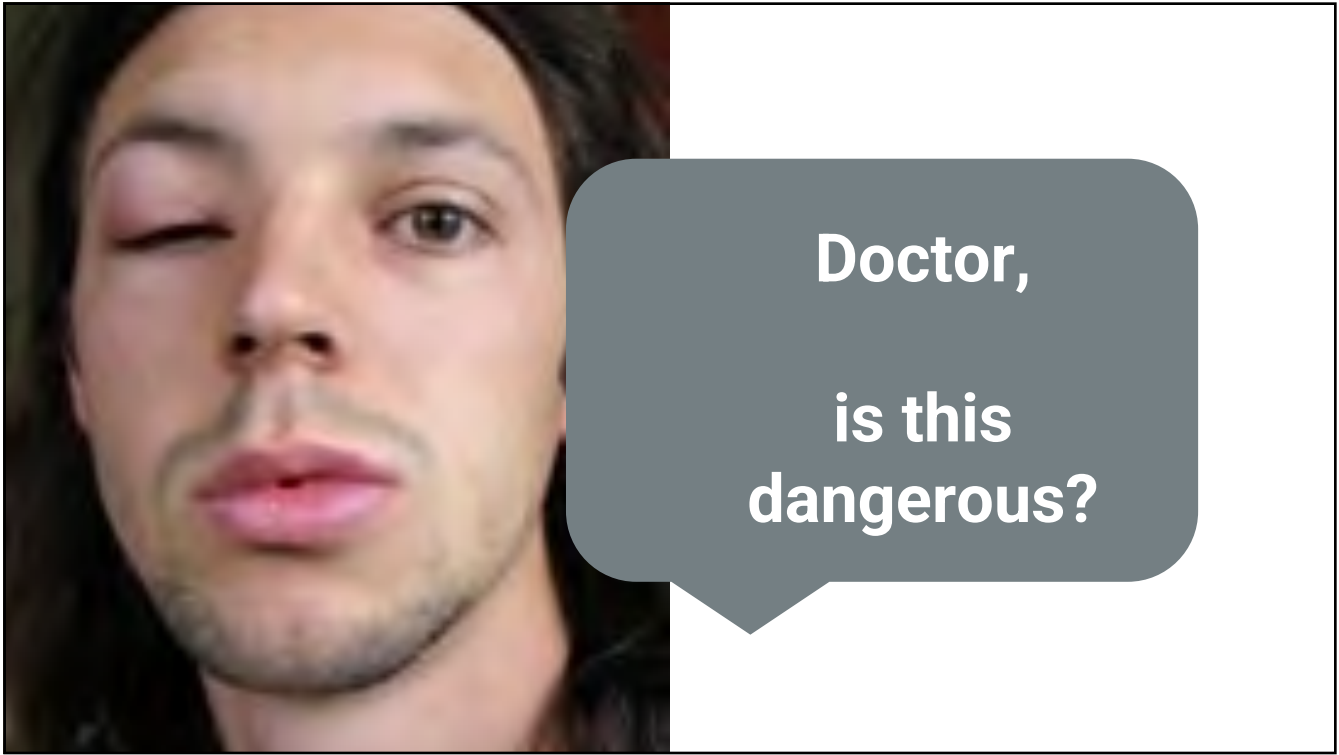
CSU > CIndU



www.urticaria-registry.com



16

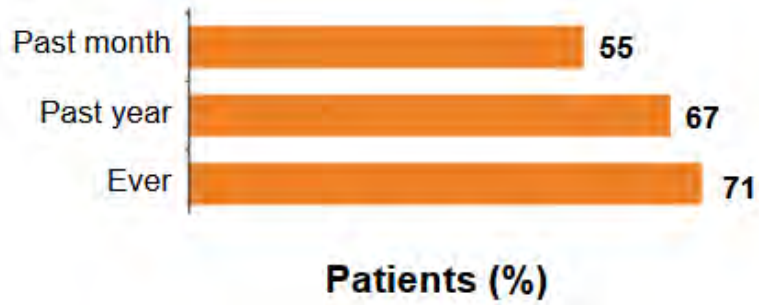


17



18

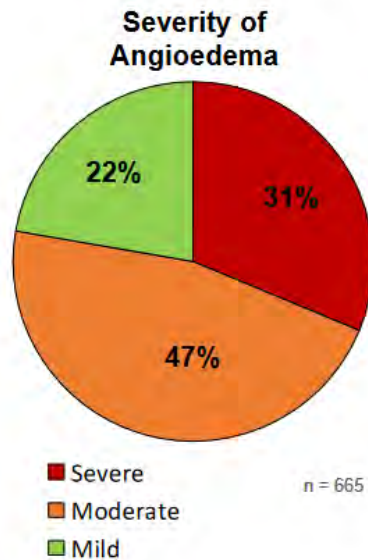
Angioedema in CSU



Maurer et al., *Allergy* 2017: 72; 2005-2016

19

Angioedema in CSU



Maurer et al., *Clin. Exp. Allergy* 2017: 47; 684-692

20



21

CSU – The Diagnostic Workup

Confirm	(differential diagnosis)
Cause	(e.g. TlaiCSU, TIIbaiCSU)
Comorbidities	(e.g. CIndU, autoimmunity, depression/anxiety)
Consequences	(e.g. sleep, distress, sexual health)
Cofactors	(e.g. triggers, aggravators)
Components	(e.g. biomarkers, predictors)
Course	(activity, impact and control)

Zuberbier et al., *Allergy* 2022; 77: 734-766

22

CSU – The Diagnostic Workup

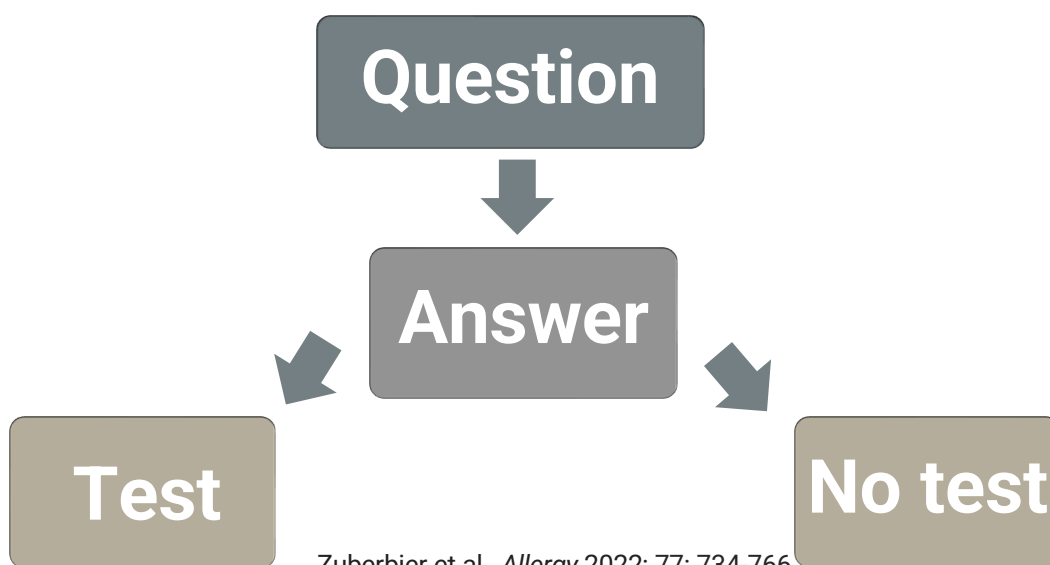
- ✓ **ESR and/or CRP**
- ✓ **Differential blood count**
- ✓ **IgE, IgG-anti-TPO**



Zuberbier et al., *Allergy* 2022; 77: 734-766

23

CSU – The Diagnostic Workup



Zuberbier et al., *Allergy* 2022; 77: 734-766

24

CSU – The Diagnostic Workup

Confirm	(differential diagnosis)
Cause	(e.g. TlaiCSU, TIIbaiCSU)
Comorbidities	(e.g. CIndU, autoimmunity, depression/anxiety)
Consequences	(e.g. sleep, distress, sexual health)
Cofactors	(e.g. triggers, aggravators)
Components	(e.g. biomarkers, predictors)
Course	(activity, impact and control)

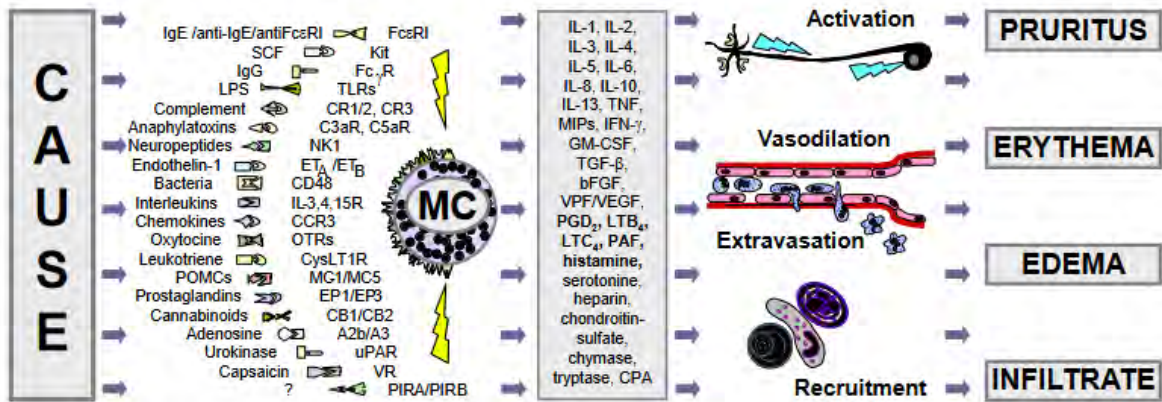
Zuberbier et al., *Allergy* 2022; 77: 734-766

25



26

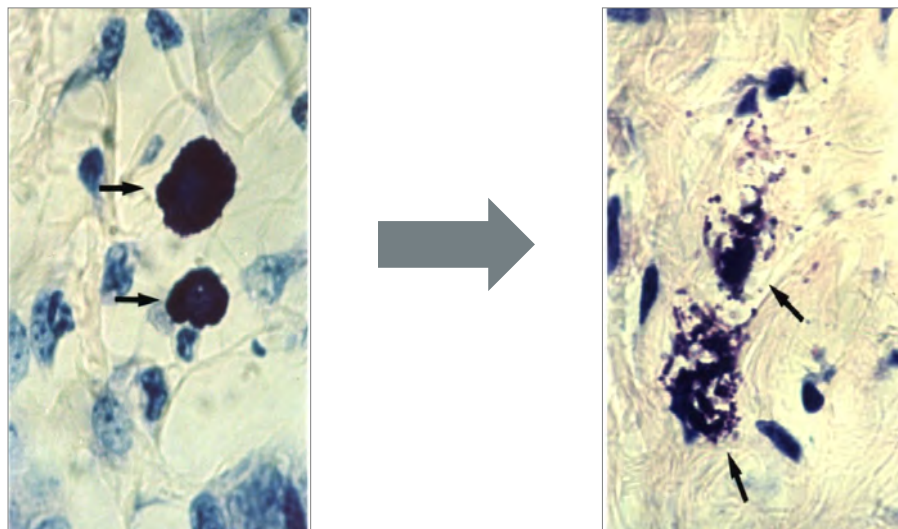
CSU is a mast cell driven disease



Church et al., *Immunol. Rev.* 2018: 282; 232-247

27

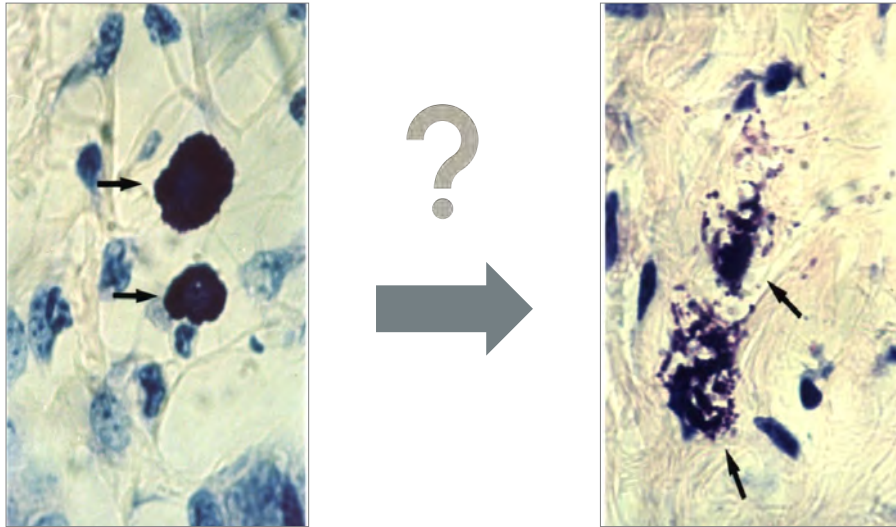
Mast cell degranulation



Church et al., *Immunol. Rev.* 2018: 282; 232-247

28

Mast cell degranulation

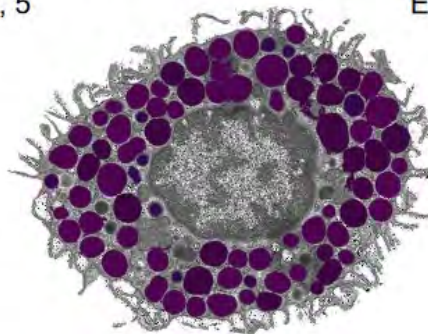


Church et al., *Immunol. Rev.* 2018: 282; 232-247

29

What degranulates mast cells in CSU?

IL-3R, IL-4R, IL-6R, IL-10R, IL-15R
 C3aR, C5aR, CR1/2, CR3, CR4
 CXCR1, 2, 4, CCR3, 5
 PAR2, OTRs, A₃R
 TrkA, MC-1/MC-5
 PIR-A/PIR-B
 CD40L, OX40
 TSLP, IL-25, IL-33



FcεRI, FcγRIIb, FcγRIII
 TLR1, 2, 3, 4, 6, 7, 8, 9
 EP-1/EP-3, CysLT1R
 c-kit, CD48, LTβR
 ET_A/ET_B, uPAR
 CB1/CB2, VR
 G1TR, B7-1, -2
 MRGPX2, NK1R

Church et al., *Immunol. Rev.* 2018: 282; 232-247

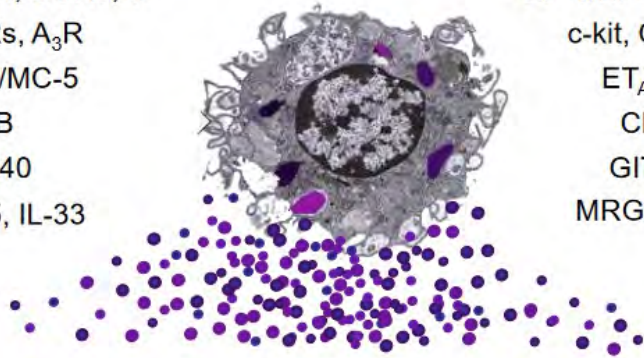
30

FcεRI degranulates mast cells in CSU!

IL-3R, IL-4R, IL-6R, IL-10R, IL-15R
 C3aR, C5aR, CR1/2, CR3, CR4
 CXCR1, 2, 4, CCR3, 5
 PAR2, OTRs, A₃R
 TrkA, MC-1/MC-5
 PIR-A/PIR-B
 CD40L, OX40
 TSLP, IL-25, IL-33

FcεRI

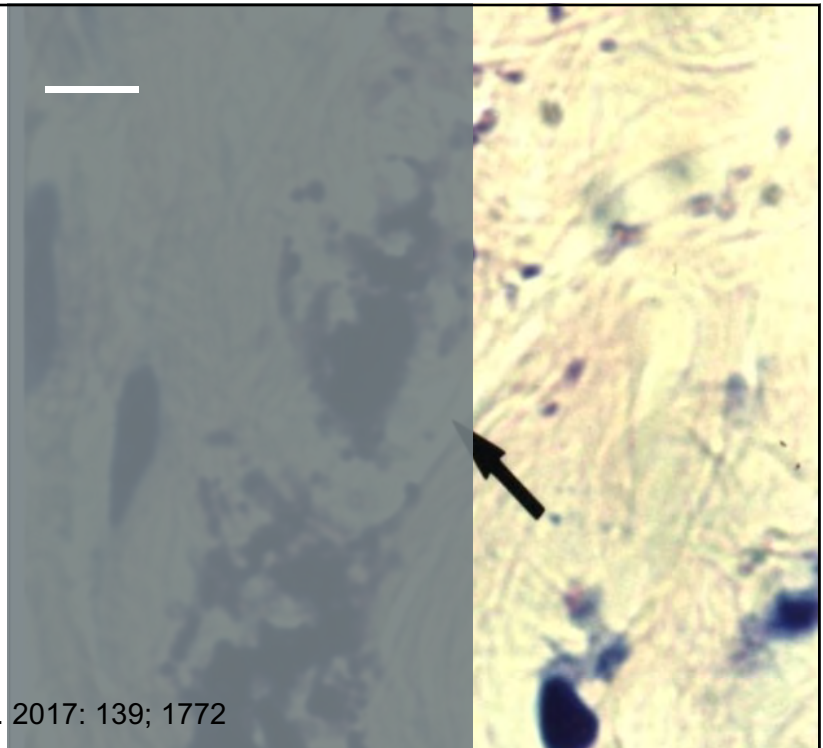
, FcγRIIb, FcγRIII
 TLR1, 2, 3, 4, 6, 7, 8, 9
 EP-1/EP-3, CysLT1R
 c-kit, CD48, LTβR
 ET_A/ET_B, uPAR
 CB1/CB2, VR
 G1TR, B7-1, -2
 MRGPX2, NK1R



Church et al., Immunol. Rev. 2018: 282; 232-247

31

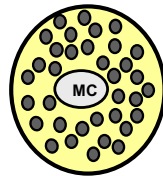
How does
FcεRI
 degranulate
 mast cells in
 CSU?



Kolkhir et al., *J. Allergy Clin. Immunol.* 2017: 139; 1772

32

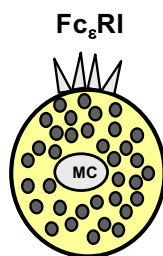
The role of Fc ϵ RI in CSU



Maurer et al., *Front. Immunol.* 2018: 9; 689

33

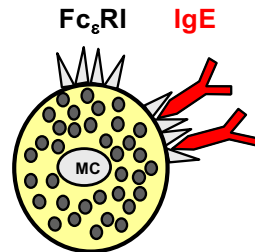
The role of Fc ϵ RI in CSU



Maurer et al., *Front. Immunol.* 2018: 9; 689

34

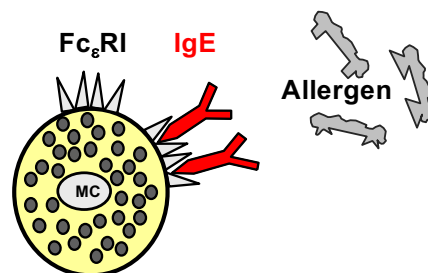
The role of Fc ϵ RI in CSU



Maurer et al., *Front. Immunol.* 2018; 9; 689

35

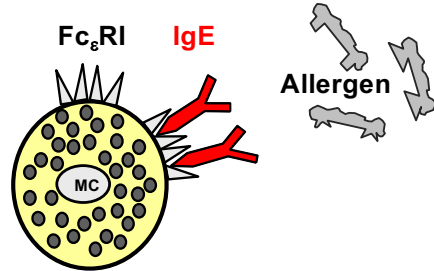
The role of Fc ϵ RI in CSU



Maurer et al., *Front. Immunol.* 2018; 9; 689

36

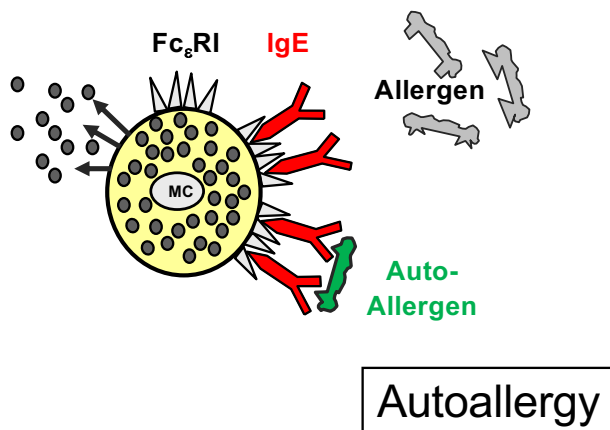
The role of Fc ϵ RI in CSU



Maurer et al., *Front. Immunol.* 2018; 9; 689

37

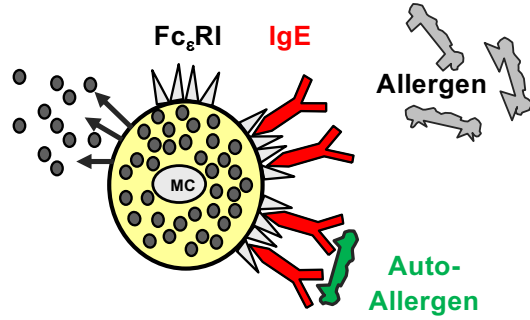
The role of Fc ϵ RI in CSU



Maurer et al., *Front. Immunol.* 2018; 9; 689

38

The role of FcεRI in CSU

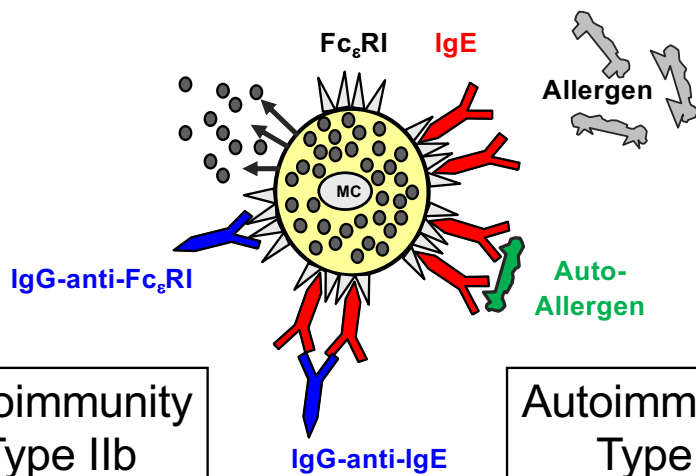


Autoimmunity
Type I

Maurer et al., *Front. Immunol.* 2018; 9; 689

39

The role of FcεRI in CSU



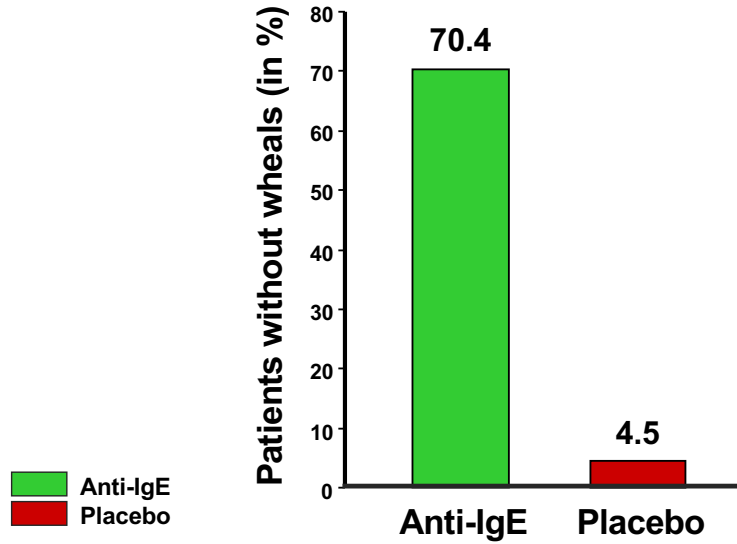
Autoimmunity
Type IIb

Autoimmunity
Type I

Kolkhir et al., *J. Allergy Clin. Immunol.* 2017; 139; 1772

40

High responder rates in omlizumab-treated patients with Type I autoimmune CSU



Maurer et al., *J Allergy Clin Immunol* 2011; 128: 202-209

41

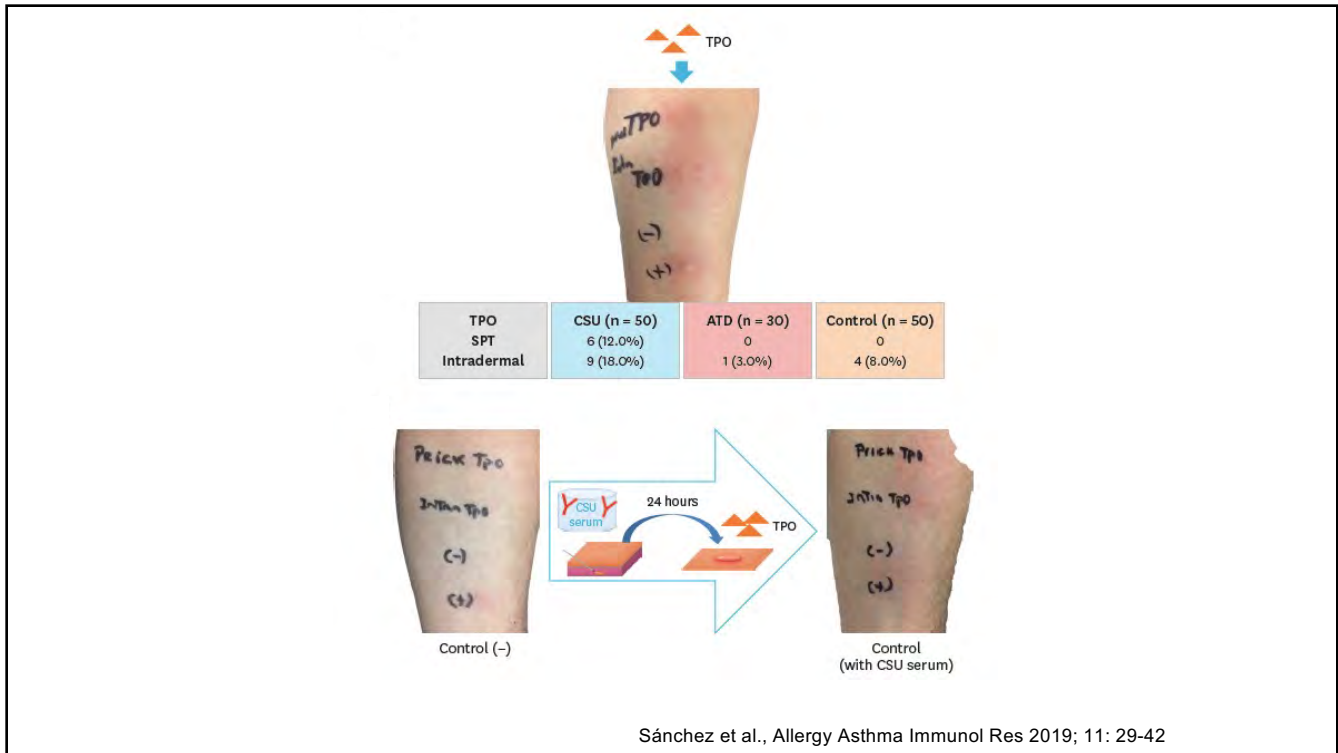
TPO



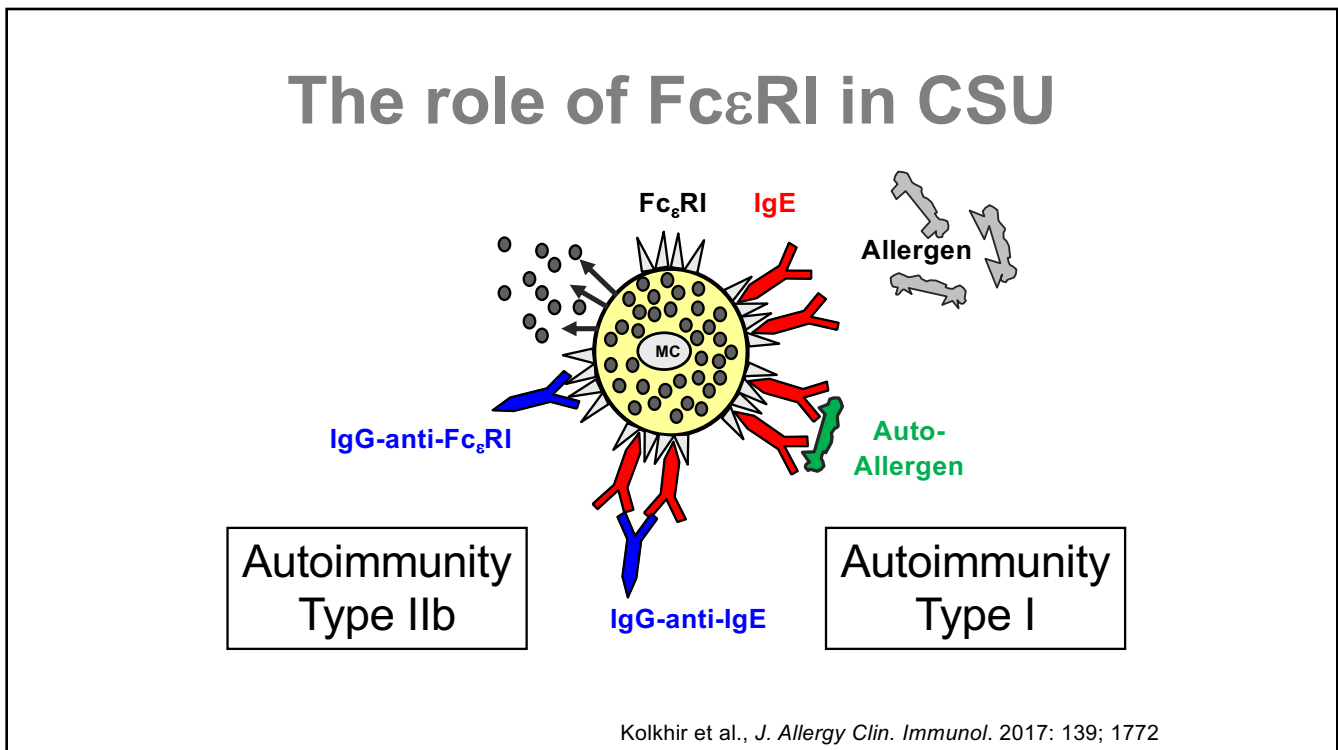
	CSU (n = 50)	ATD (n = 30)	Control (n = 50)
TPO			
SPT	6 (12.0%)	0	0
Intradermal	9 (18.0%)	1 (3.0%)	4 (8.0%)

Sánchez et al., *Allergy Asthma Immunol Res* 2019; 11: 29-42

42

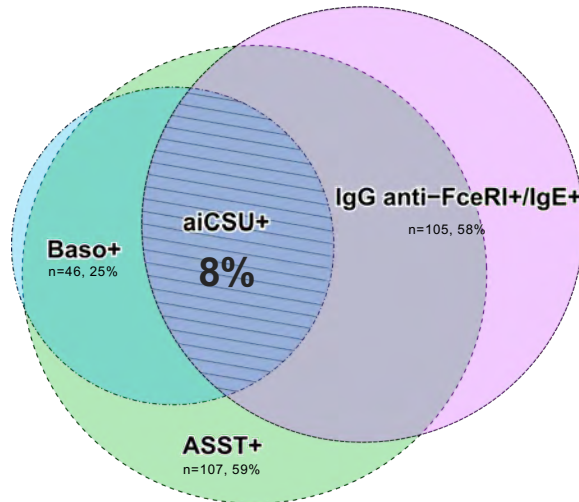


43



44

Only 1 in 12 CSU patients has “true” T11b autoimmune CSU

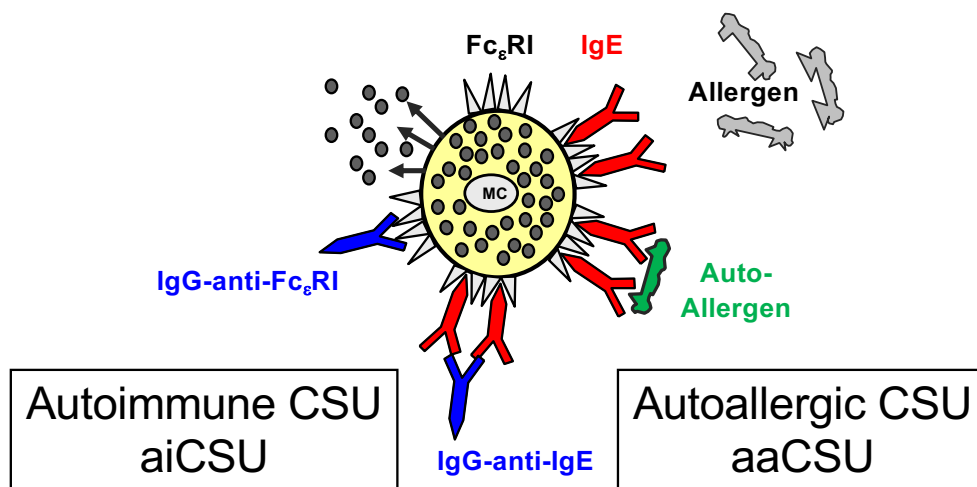


N = 182

Schoepke et al., *Allergy* 2019; 2427-2436

45

The endotypes of CSU

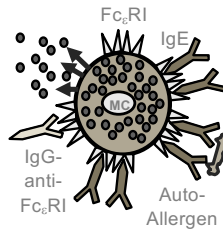


Kolkhir et al., *J. Allergy Clin. Immunol.* 2017; 139; 1772

46

Type IIb aiCSU „True“ autoimmunity

- Rate of autoimmune comorbidity: **High**
- Rate of allergy comorbidity: **Unknown**
- Rate of ANA-positivity: **Elevated**
- Rate of eosinopenia: **Elevated**
- Rate of basopenia: **Elevated**
- Disease duration: **Long**
- Disease activity: **High**
- CRP: **Elevated**
- Total IgE: **Low**
- Antihistamines: **Poor response**
- Omalizumab: **Lower response rate**
- Speed of omalizumab response: **Slow**
- Cyclosporine: **Higher rates of responders**
- Fenebutinib: **Fast, good & sustained response**



Type I aiCSU Autoallergy

- Unknown rate of autoimmune comorbidity
- Higher** rate of allergy comorbidity
- Unknown rate of ANA-positivity
- Unknown rate of eosinopenia
- Unknown rate of basopenia
- Unknown disease duration
- Unknown disease activity
- Unknown CRP levels
- High or normal** total IgE
- Unknown antihistamine response
- High** omalizumab response rates
- Fast onset** of omalizumab effects
- Unknown response to cyclosporine
- Unknown response to fenebutinib

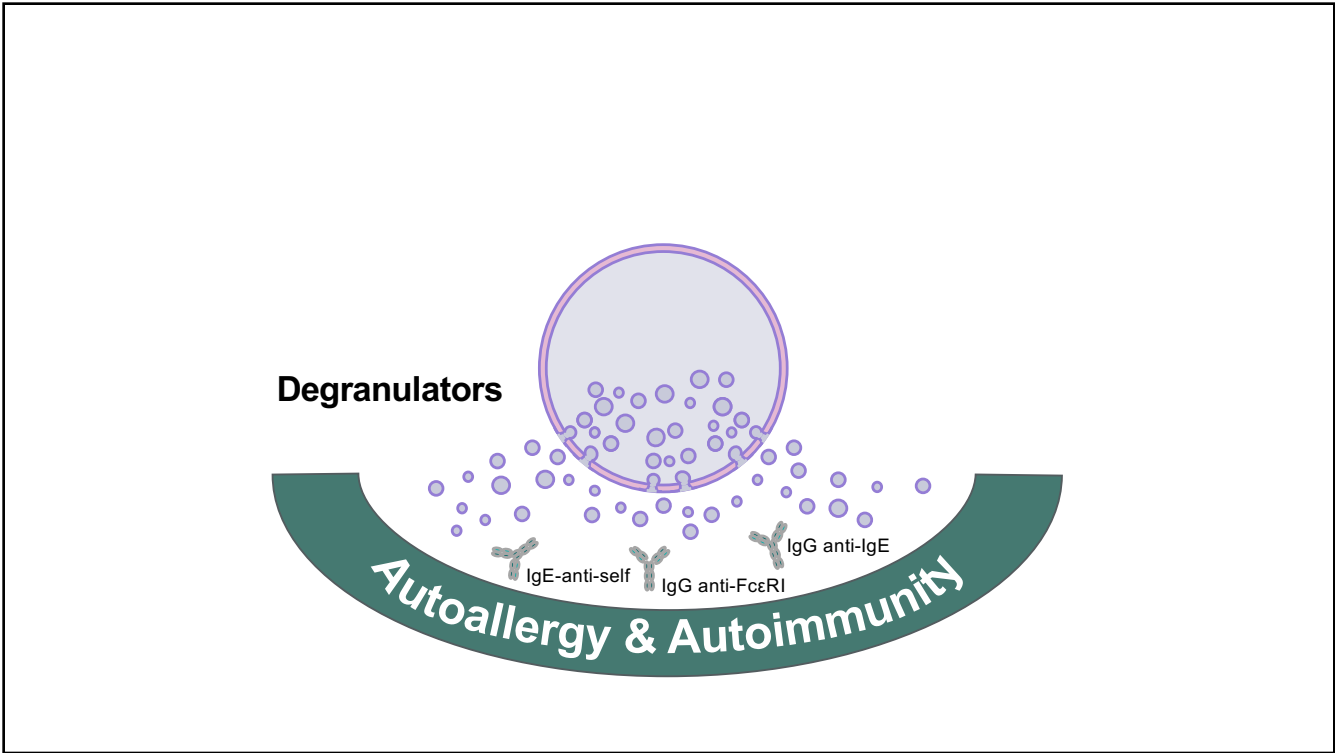
Kolchir et al., *J. Allergy Clin. Immunol.* 2017; 139; 1772

47

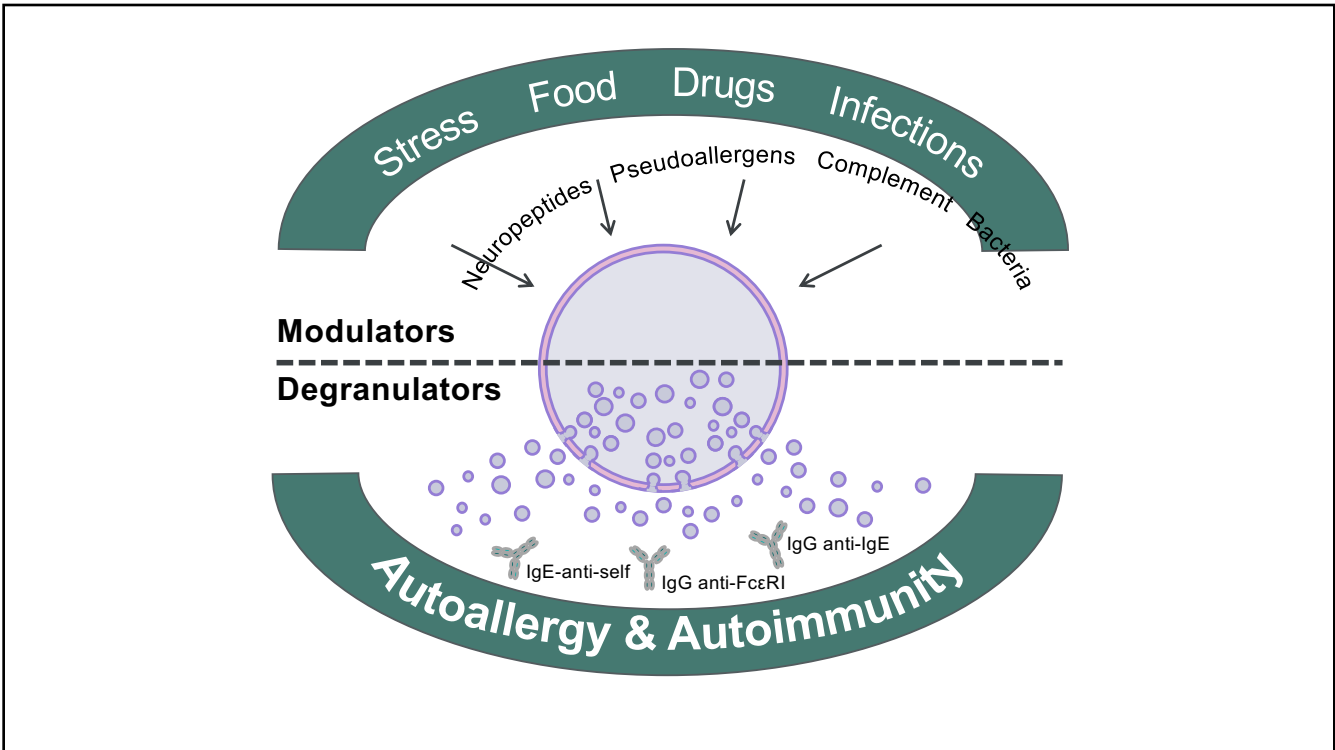
Doctor,
I think its what
I eat



48



49



50

Possible Triggers (NOT CAUSES!!!) of CSU

- NSAIDs (Ibu, Diclo, ASS)
- Viral Infections
- Stress

51

Doctor,
How long will I
have this?



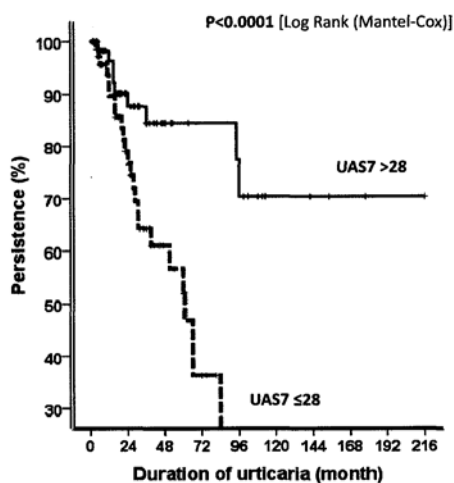
52

Chronic urticaria is of long duration

5 – **7** years on average

53

CSU in children: severe = long lasting!



Yilmaz et al., Allergy Asthma Proc. 2017;38:136-142

54



**Doctor,
I need something
that helps!**

55

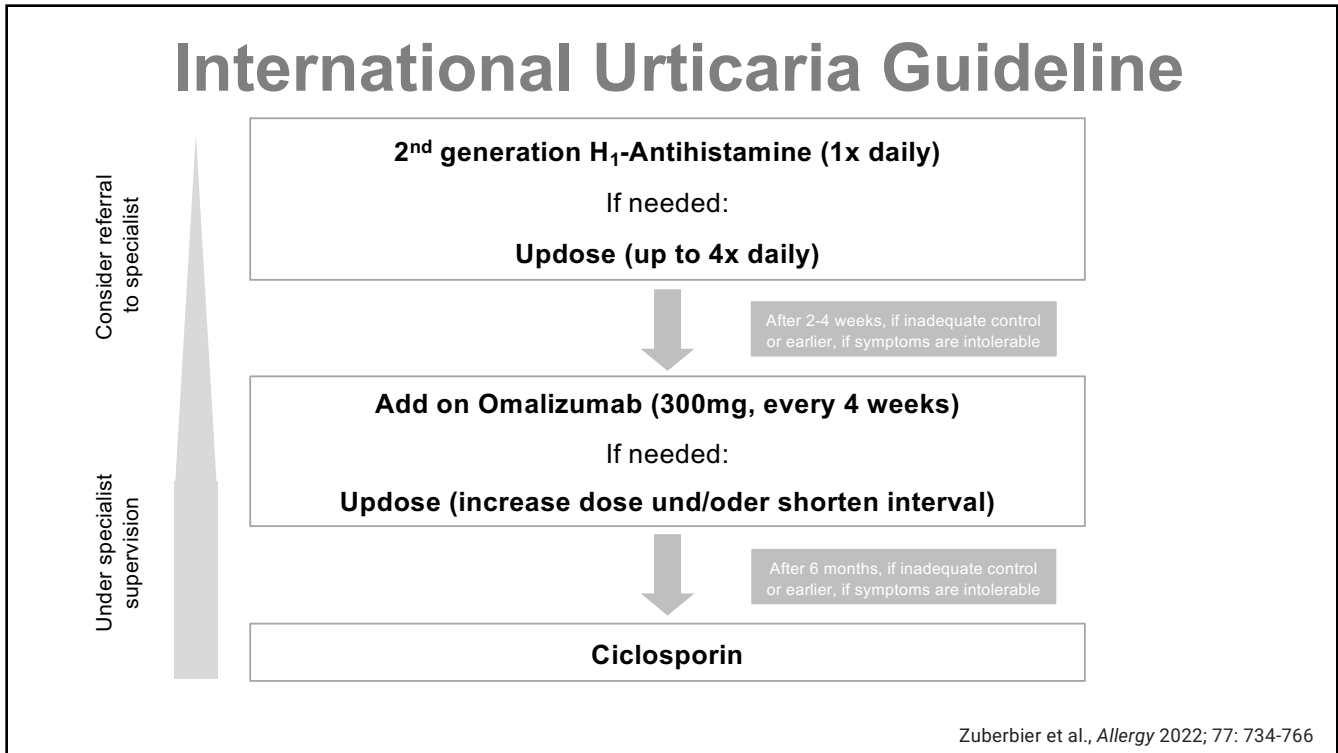
What is the goal of treating patients with chronic urticaria?



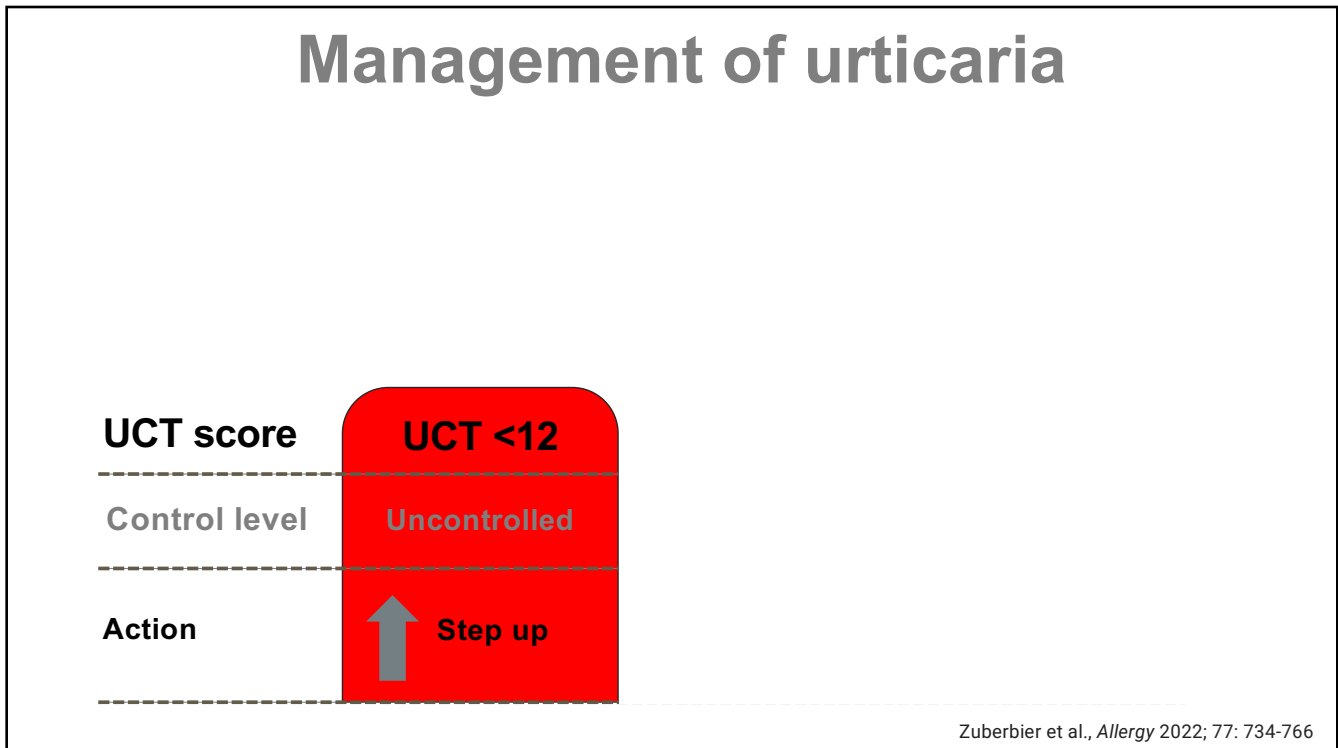
Treat the disease until it's gone

Zuberbier et al., *Allergy* 2022; 77: 734-766

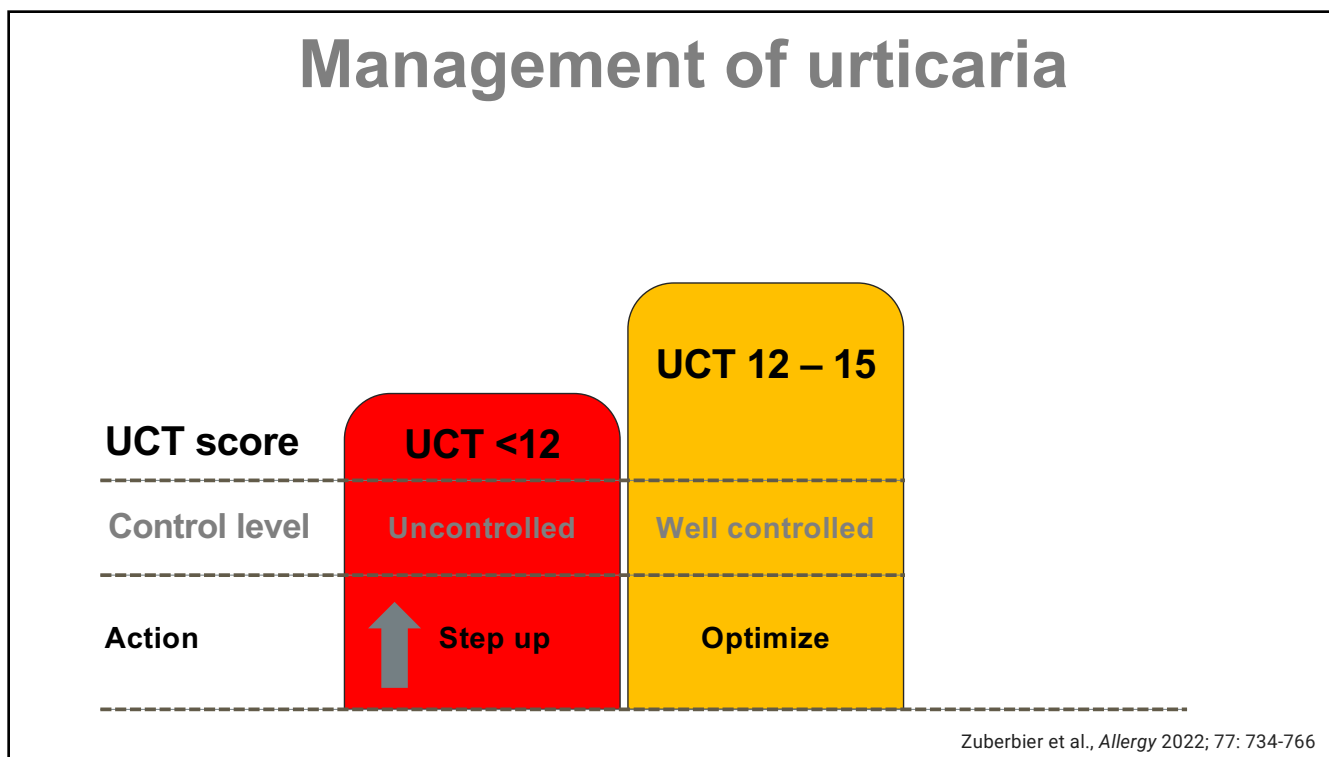
56



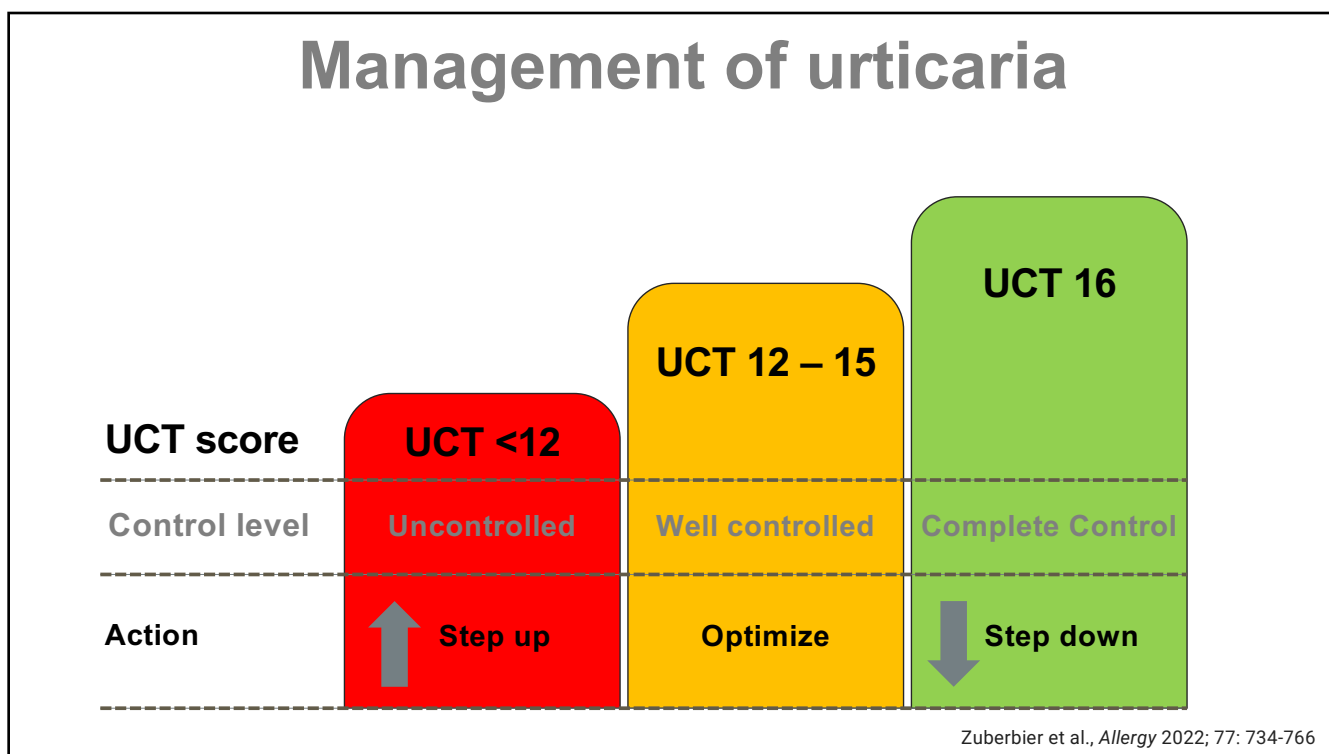
57



58



59



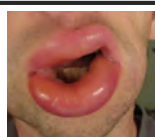
60



61

Be a Pro. Use PROMS!

CSU



CIndU



Disease activity	UAS	AAS	Provo
Disease control	UCT	AECT	UCT
Quality of life	CU-Q2oL	AE-QoL	CIndU-QoL

moxie-gmbh.de

62

Urticaria Control Test (UCT)

- How much have you suffered from the **physical symptoms of the urticaria (itch, hives (welts) and/or swelling)** in the last four weeks?
 very much much somewhat a little not at all
- How much was your **quality of life** affected by the urticaria in the last 4 weeks?
 very much much somewhat a little not at all
- How often was the **treatment** for your urticaria in the last 4 weeks **not enough** to control your urticaria symptoms?
 very often often sometimes seldom not at all
- Overall**, how well have you had your urticaria **under control** in the last 4 weeks?
 not at all a little somewhat well very well

Weller et al., J. Allergy Clin. Immunol. 2014; 133; 1365-1372

63

Urticaria Control Test (UCT)


- How much have you suffered from the **physical symptoms of the urticaria (itch, hives (welts) and/or swelling)** in the last four weeks?
 very much much somewhat a little not at all
 0 points 1 point 2 points 3 points 4 points
- How much was your **quality of life** affected by the urticaria in the last 4 weeks?
 very much much somewhat a little not at all
 0 points 1 point 2 points 3 points 4 points
- How often was the **treatment** for your urticaria in the last 4 weeks **not enough** to control your urticaria symptoms?
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Weller et al., J. Allergy Clin. Immunol. 2014; 133; 1365-1372

64

Urticaria Control Test (UCT)

1. How much have you suffered from the **physical symptoms of the urticaria (itch, hives (welts) and/or swelling)** in the last four weeks?
 very much much somewhat a little not at all
2. How much was your **quality of life** affected by the urticaria in the last 4 weeks?
 very much much somewhat a little not at all
3. How often was the **treatment** for your urticaria in the last 4 weeks necessary to control your urticaria symptoms?
 very often often sometimes seldom not at all
4. **Overall**, how well have you had your urticaria **under control** in the last 4 weeks?
 not at all a little somewhat well very well


≥ 12 = 

Weller et al., J. Allergy Clin. Immunol. 2014; 133; 1365-1372

65

Urticaria Control Test (UCT)

1. How much have you suffered from the **physical symptoms of the urticaria (itch, hives (welts) and/or swelling)** in the last four weeks?
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 very often often sometimes seldom not at all
4. **Overall**, how well have you had your urticaria **under control** in the last 4 weeks?
 not at all a little somewhat well very well

16 = 

Weller et al., J. Allergy Clin. Immunol. 2014; 133; 1365-1372

66



Where do I get help and information?

67



UCARE
Urticaria Centers of Reference and Excellence
A GA²LEN NETWORK



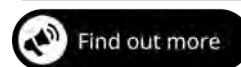
68

UCARE: Urticaria Centers of Reference and Excellence

Providing excellence in urticaria management

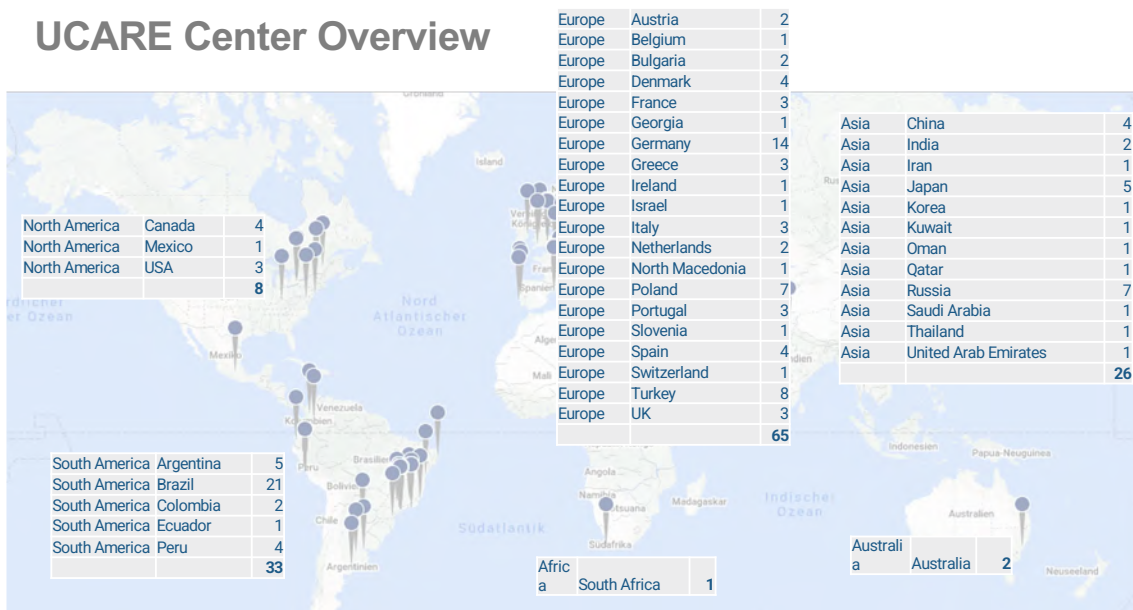
Aims:

- Increase the knowledge of urticaria via research, studies and education
 - Promote the awareness of urticaria via advocacy activities
 - Improve the care/treatment of urticaria patients worldwide
- **135 certified UCAREs in 42 countries** (as of July 2022)
 - **20 scientific UCARE projects** (16 current and upcoming, 4 completed)
 - **UCARE LevelUp** – the education program for physicians
 - **UCARE 4U** – the education program for patients
 - **Meetings:** UDAY (October 1), GUF and UCARE Conference (alternating annually in December)
 - **CRUSE** – The UCARE Chronic Urticaria Self evaluation app
 - **Website:** www.ga2len-ucare.com



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UCARE Center Overview



New UCAREs in 2022 **10**

New UCAREs in 2021 **13**

Applicant Centres **23**

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UCARE Programs

**UCARE
LEVELUP**

UCARE 4U

UCARE Program Sponsors



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UCARE *LevelUp*: Physician Education Platform

Aims:

- Update physicians on recent developments in urticaria,
- Establish a platform for interaction among physicians who treat patients with CU,
- Improve the interaction of general practitioners and specialist
- Build strategic therapeutic plans for patient
- Improve the use of patient-reported outcome measures (PROMs)
- Streamline the CU patient journey to disease control

Activities:



WEBINAR



VIDEO



NEWSLETTER



PODCAST



WEBSITE



UCARE LevelUp



JOURNAL CLUBS



FIRESIDE CHAT



POSTER SESSION



GRAND ROUNDS

**UCARE
LEVELUP**

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UCARE LevelUp: Patient Education Platform Stats



Format	Number of events	Live Registrations	Views on demand	Events in preparation
Webinar	3	480 (136 / 43 / 301)	474 (172 / 186 / 116)	6
Educational Video	3	Not applicable	602 (280 / 168 / 154)	4
Newsletter	3	Not applicable	Not Available	3
Podcast	42	Not applicable	8,500	8
Fireside Chat	3	228 (62 / 109 / 57)	280 (131 / 134 / 15)	6
Journal Club	11	Not applicable	Not applicable	6
Grand Round	0	Not Available	Not Available	1
Poster Session	1	24	Not applicable	1



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UCARE 4U: Patient Education Platform

Aims:

- Bringing extensive information directly to patients affected by urticaria
- Update patients on recent developments in urticaria
- Help patients understand causes of Chronic Urticaria (CU)
- Improve patients' understanding of trigger
- Educate patients on the simultaneous presence of comorbidities with CU
- Unite patient and physician efforts to improve the treatment of CU
- Expand the knowledge of treatment options for patients with CU

Activities:



UDAY



WEBSITE



WEBiNAR




Social Media




<https://ucare-4u.com/>

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UCARE 4U: Patient Education Platform Stats






WEBINAR

Format	Number of events	Live Registrations	Views on demand	Events in preparation
Webinar	3	380 <small>(160 / 121 / 99)</small>	1162 <small>(459 / 200 / 66 / 35 / 98 / 21 / 58 / 25 / 24 / 55 / 77 / 44)</small>	6



Social Media

Channel	Number of Hits
Twitter (LU and 4U)	140,084
LinkedIn	19,499
YouTube	2,469
Facebook	N/A
Reddit	5,437
Instagram	N/A



WEBSITE

75

UCARE Tools



**ChRonic
Urticaria
Self-
Evaluation**



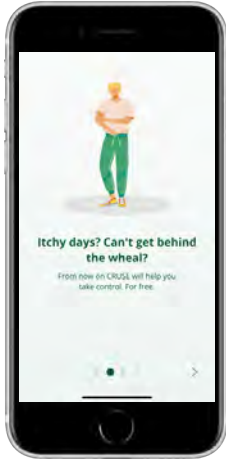
UCARE CRUSE Sponsors





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CRUSE® – Chronic Urticaria Self Evaluation App



The CRUSE® advantage for patients and physicians

- CRUSE® enables patients to fill out their Patient Reported Outcome Measure (PROMs) daily on their smart device
- CRUSE® reminds patients to monitor their quality of life through push notification
- CRUSE® allows patients to send a report of their PROM scores to their treating physician via Email, WhatsApp or other communication paths
- CRUSE® promotes continued monitoring and documentation of CSU disease activity, impact and control that is needed for patients to receive optimal treatment



CRUSE® app contributes to the understanding of Urticaria through data collection (all anonymized)

- Giving us a true understanding on how patients live
- Seeing the patients' experience on how different medication affects their quality of life
- Allowing insight on how treatment can be improved

www.cruse-control.com



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CRUSE® – Global Launch and availability



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GUF 2022

6th GA²LEN GLOBAL URTICARIA FORUM
BERLIN, 7-8 DECEMBER 2022

Global Urticaria Forum

What to expect?

- 2 days to learn and exchange ideas on chronic urticaria and related diseases
- Scientific sessions with oral presentations
- Overview lectures by international experts
- Workshops and poster sessions
- Discussions and scientific interactions with fellow urticaria researchers and physicians
- The newest insights on urticaria pathogenesis, subtypes, biomarkers, comorbidities, diagnostic work up, impact of disease, and treatment
- Many practical tips on how to manage urticaria and other mast cell-driven diseases
- A special focus will be on recurrent angioedema with all of its many subtypes

7-8 December 2022

Berlin, Germany

Website: www.globalurticariaforum.org
Email us: guf@remember-management.de
Call us: +49 30 47 37 25 77

In cooperation with



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The Charité UCARE in Berlin



marcus.maurer@charite.de

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Do you have Chronic Inducible Cold Urticaria?

Chronic Inducible Cold Urticaria impacts everyone differently.

We want to understand your experience.

Earn up to \$185 for your participation.



Take part in a research interview and earn \$185

<https://survey.cmix.com/3DD9872D/7E305C4Q/en-US>

#Sponsored by IQVIA

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QUESTIONS



We'll get to as many questions as we can!

The webinar recording will be posted to our website along with a printable copy of the slides.

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Thank you for listening!

We appreciate you being here.

NEXT Advances Webinar:

Current & Future Treatments for Food Allergy

September 27, 2022

Dr. Katherine Anagnostou

Join us next time



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Breathe Better Together



Please stay online for 2-3 minutes to complete the evaluation survey – we use this information to plan future webinars!

allergyasthmanetwork.org

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