



## VENOM ALLERGY

Patient case #1



# Indication for double or single venom immunotherapy?

Maria, 25 years old

Not approved for use in the United States

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# background

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## Maria, 25 years old:

- Stung by an unknown insect in the middle finger of the right hand.
  - After several minutes, occurrence of generalized itching, red spots on the trunk, shortness of breath and tightness in the throat.
  - Improvement of symptoms after emergency medical treatment with systemic glucocorticosteroids and antihistamines.
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## General case history:

- High blood pressure
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## Conventional diagnostics

- Positive skin prick test: bee venom (100 µg/ml)++, wasp venom (300 µg/ml)++
- Positive ImmunoCAP® test:

	ImmunoCAP®	test results
Bee venom	i1	5.9 kU <sub>A</sub> /l
Wasp venom	i3	1.3 kU <sub>A</sub> /l
Paper wasp venom	i77	1.0 kU <sub>A</sub> /l
ImmunoCAP Total-IgE:		16.7 kU <sub>A</sub> /l
ImmunoCAP Tryptase:		5.4 µg/l

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## Result interpretation:

- The skin tests, as well as the specific IgE-determination, depict a double sensitization to bee and wasp venom. A decision cannot be made whether there is a true double sensitization or a cross-reaction.
- The basal tryptase value is in normal range.
- There is an indication for venom immunotherapy. It is unclear whether this should be performed with bee and/or wasp venom.

# current visit

## Molecular diagnostics with ImmunoCAP Allergen Components

	ImmunoCAP	test results
Bee venom	rApi m 1	3.9 kU <sub>A</sub> /l
	rApi m 2	<0.1 kU <sub>A</sub> /l
	rApi m 3	2.4 kU <sub>A</sub> /l
	rApi m 5	2.9 kU <sub>A</sub> /l
	rApi m 10	5.6 kU <sub>A</sub> /l
Wasp venom	rVes v 1	<0.1 kU <sub>A</sub> /l
	rVes v 5	<0.1 kU <sub>A</sub> /l
	rPol d 5	<0.1 kU <sub>A</sub> /l
CCD	MUXF3	1.3 kU <sub>A</sub> /l

### Interpretation of findings:

- The molecular allergy testing, with the eight CCD-free recombinant allergen components shows:
  - sensitization to the major specific allergens in bee venom Api m 1, Api m 3 and Api m 10
  - sensitization to the bee venom allergen Api m 5
  - no sensitization to the bee venom allergen Api m 2.
- Specific IgE to cross-reactive carbohydrate determinants (CCDMUXF3) helps explain the positive test for wasp venom (i3 and i77).
- Specific IgE to Api m 5, with homologue Ves v 3 in wasp, may also add to the positive test for wasp.

Diagnosis: A specific sensitization to bee venom, supporting a bee allergy

Treatment: According to these findings, a VIT with only bee venom is performed

# A broad toolbox of ImmunoCAP Allergen Components

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Over 100 allergen components that can help you:

- Assess risk of systemic reactions in patients with food allergy<sup>1</sup>
- Explain symptoms due to cross-reactivity<sup>1</sup>
- Identify the right patients for allergen-specific immunotherapy<sup>1</sup>

**Reference: 1.** Canonica GW, et al. WAO – ARIA – GA<sup>2</sup>LEN Consensus Paper on Molecular-based Allergy Diagnostics. World Allergy Organ J. 2013;6:17.

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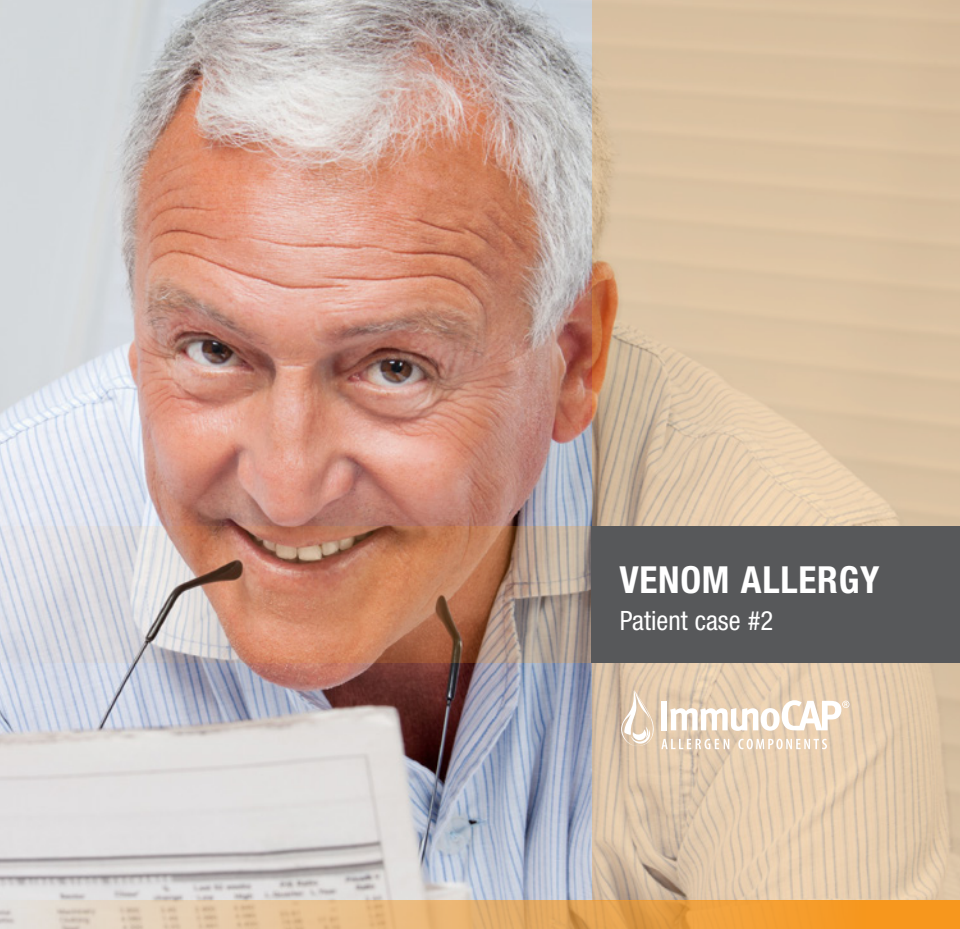
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## VENOM ALLERGY

Patient case #2



# Indication for double or single venom immunotherapy

Thomas, 68 years old

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# background

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## Thomas 68 years old:

- Stung by an unidentified insect in the right shoulder.
  - After about 30 minutes, appearance of a general sensation of heat, itching, generalized rash, facial edema, and dizziness.
  - Improvement of symptoms after treatment by a general practitioner with intravenous glucocorticosteroids and oral antihistamine.
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## Conventional diagnostics

- Positive skin prick test: bee venom (100 µg/ml)+, wasp venom (100 µg/ml)+
- Positive ImmunoCAP® test:

	ImmunoCAP®	test results
Bee venom	i1	3.5 kU <sub>A</sub> /l
Wasp venom	i3	4.0 kU <sub>A</sub> /l
ImmunoCAP Total-IgE:		460 kU <sub>A</sub> /l
ImmunoCAP Tryptase:		1,1 µg/l

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## Result interpretation:

- The results of conventional skin testing and insect venom extract-based serological diagnosis cannot clarify whether the anaphylactic reaction was caused by a true double sensitization or by a cross-reaction.
- The basal tryptase value is in normal range.
- There is an indication for VIT. It is unclear whether this should be performed with bee and /or wasp venom.

# current visit

## Molecular diagnostics with ImmunoCAP Allergen Components

	ImmunoCAP	test results
Bee venom	rApi m 1	3.9 kU <sub>A</sub> /l
	rApi m 2	<0.1 kU <sub>A</sub> /l
	rApi m 3	2.7 kU <sub>A</sub> /l
	rApi m 5	2.9 kU <sub>A</sub> /l
	rApi m 10	3.7 kU <sub>ε</sub> /l
Wasp venom	rVes v 1	1.1 kU <sub>A</sub> /l
	rVes v 5	3.7 kU <sub>A</sub> /l
CCD	MUXF3	<0.1 kU <sub>A</sub> /l

### Interpretation of findings:

- Allergen components testing shows:
  - a genuine double sensitization to both the specific major allergens of wasp Ves v 1, Ves v 5, the bee specific major allergens Api m 1, Api m 3 and Api m 10 and the bee allergen Api m 5.
- The positive response to both extract-based tests (i1, i3) is thus not due to CCD reactivity.

Diagnosis: A double sensitization to bee and wasp venoms, supporting true bee and wasp allergies

Treatment: According to these findings, a VIT with bee venom as well as with wasp venom is performed

# A broad toolbox of ImmunoCAP Allergen Components

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Over 100 allergen components that can help you:

- Assess risk of systemic reactions in patients with food allergy<sup>1</sup>
- Explain symptoms due to cross-reactivity<sup>1</sup>
- Identify the right patients for allergen-specific immunotherapy<sup>1</sup>

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