

# Pharming Group NV

**Sijmen de Vries**  
Chief Executive Officer

**Investor Tour**  
**Zwolle**

4th October 2018

# Safe Harbour Statement

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19:00 uur - Receptie

19:25 uur - Welkomstwoord

19:30 uur - Korte corporate presentatie

20:00 uur - Sijmen de Vries Q&A met Leon Melens

20:30 uur - Audience Q&A

21:00 uur - Aanvang borrel

22:00 uur - Einde

# Company Overview



- Euronext: PHARM: ~€585 million (~\$678 million) at €0.95 per share
- Headquarters in NL, R&D in France, EU and US: **170 employees** in total
- 1st product approved and marketed : RUCONEST®
  - Recombinant human C1-esterase inhibitor (enzyme replacement therapy)
  - For acute angioedema attacks in patients with hereditary angioedema (**HAE**)
  - Marketed in USA, EU, Korea and Israel with other territories coming
  - Now being explored for larger indications: **pre-eclampsia, CIN, Cardiac Protection, DGF**
- Platform technology makes recombinant human molecules cleanly and efficiently
- New Enzyme Replacement Therapies (ERT) for other genetic conditions about to enter clinic



# Three horizons of growth

Making  
RUCONEST®  
a better  
HAE product

- Low volume IV
- Subcutaneous
- Intramuscular
- Painless intradermal
- Prophylaxis for HAE



Add more HAE sales

Meeting  
other unmet  
medical needs with  
the same  
product

- Pre-eclampsia
- Others such as Contrast-induced Nephropathy, Cardiac Protection, Delayed Graft Function and Hypovolemic Shock



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Meeting  
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- $\alpha$ -glucosidase (Pompe)
- $\alpha$ -galactosidase (Fabry)
- Others

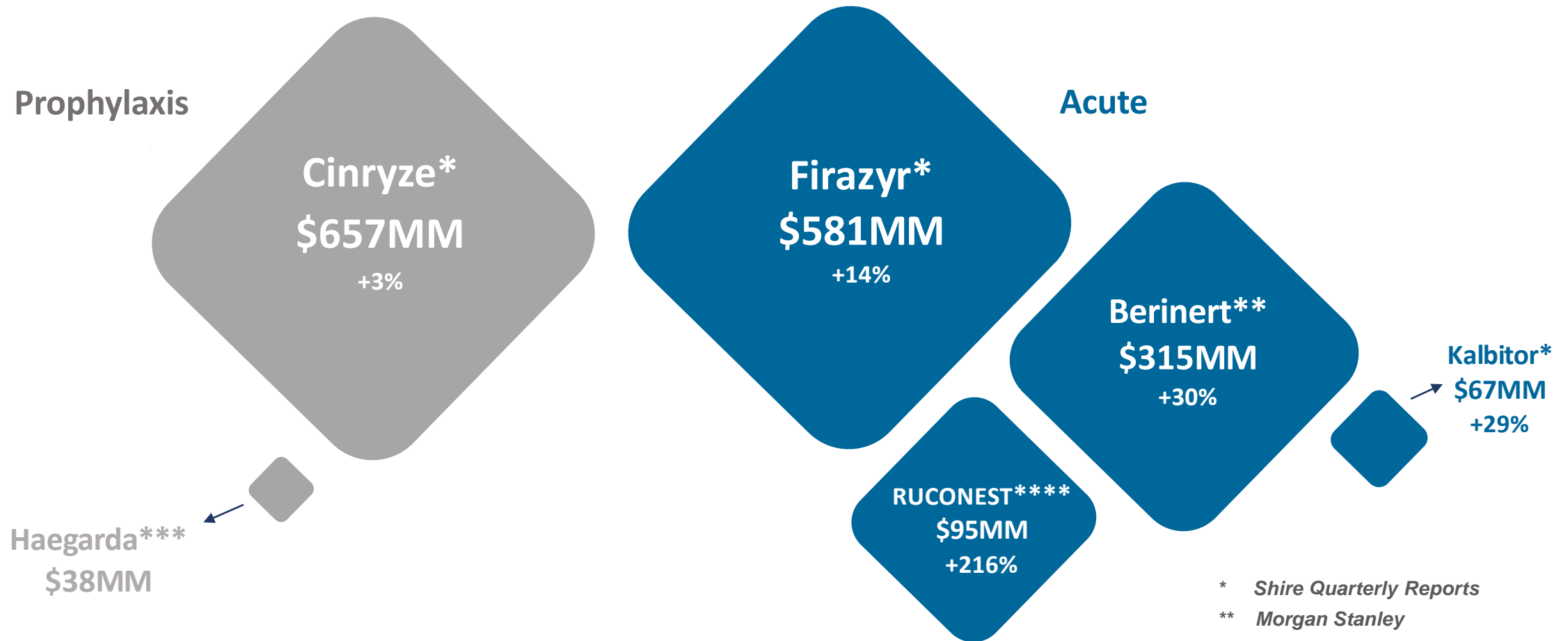


Add more products to sell

# US Market for HAE drugs



~\$1.7 billion Sales in 2017 (Year-on-year growth 17%)



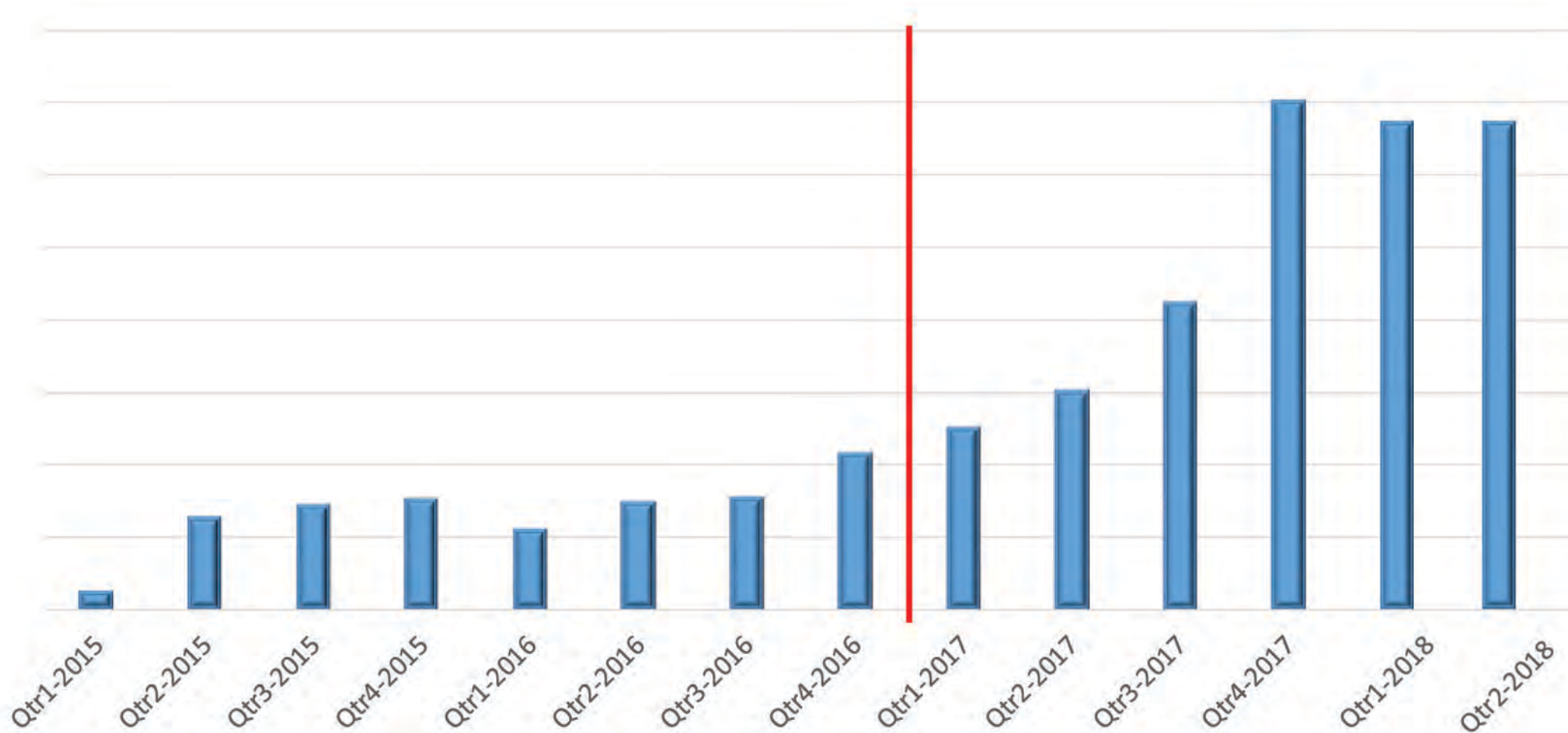
\* Shire Quarterly Reports

\*\* Morgan Stanley

\*\*\* Evaluate Pharma

\*\*\*\* Pharming Reported Net Sales

# US quarterly sales development in volumes





# What patients want when living with HAE



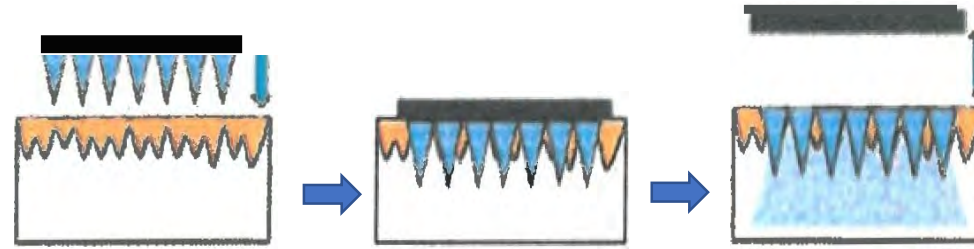
Patients want a therapy that is convenient and pain-free



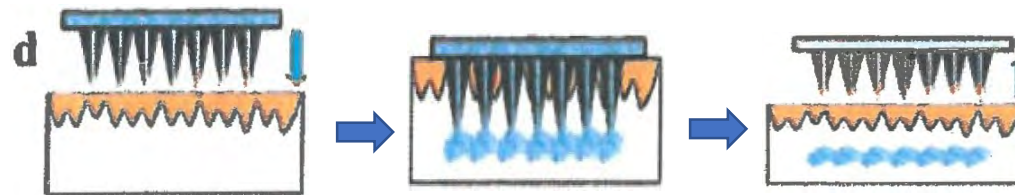
*"My veins are shot,  
so I inject my medicine in my  
stomach. It is so painful and my  
stomach has bruises everywhere.  
I wish I had a medicine that didn't  
hurt and was quick  
and easy to use."*

- The “RUCONEST® liquid” formulation (14ml → 3ml) can be used as starting material for the generation of **subcutaneous, intra-muscular & intradermal** application systems
- New proprietary ‘painless’ intradermal delivery applications are being developed:

- Dissolving point device:



- Reservoir device:



- These painless versions should differentiate RUCONEST® from competitors, all of whom have painful injections

# New Activities with rhC1INH (RUCONEST®)



## Initial Therapeutic Indications selected:

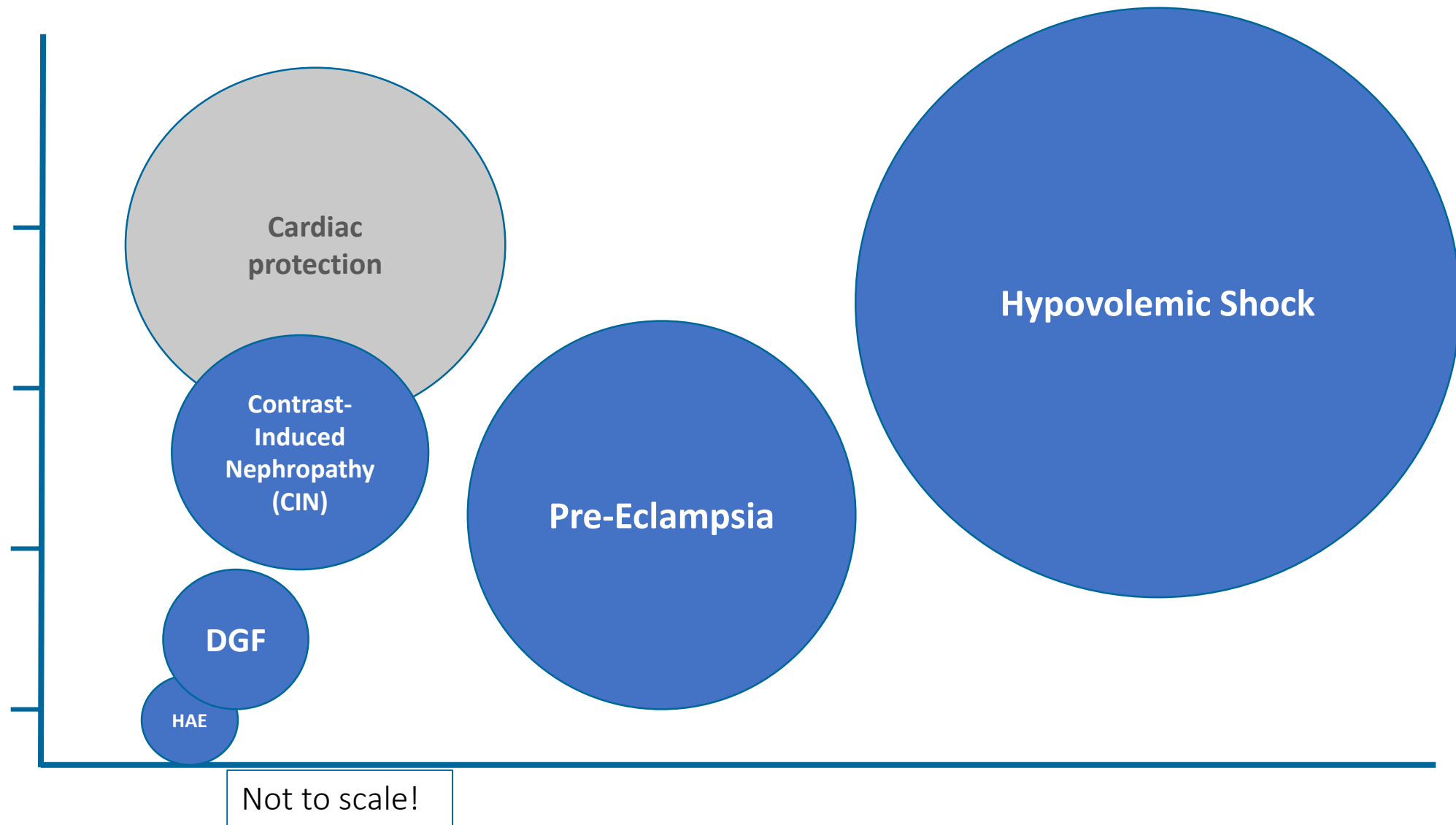
### New Potential Indications using existing formulation

- Organ damage after contrast media application:- **Contrast-induced Nephropathy (CIN)** (ongoing Investigator initiated study)
- Tissue Damage after Toxic Event :- **Pre-Eclampsia (Zwangerschapsvergiftiging)** (new Pharming)
- Tissue Damage after Hypoxic Event :- **Delayed Graft Function** (new Investigator initiated study)
- Vascular/cardiac damage due to investigation/operation:- **Cardiac protection** (depends on data from above study)
- Shock response after trauma:- **Hypovolemic Shock** – ongoing preclinical research projects with US Army and US Air Force

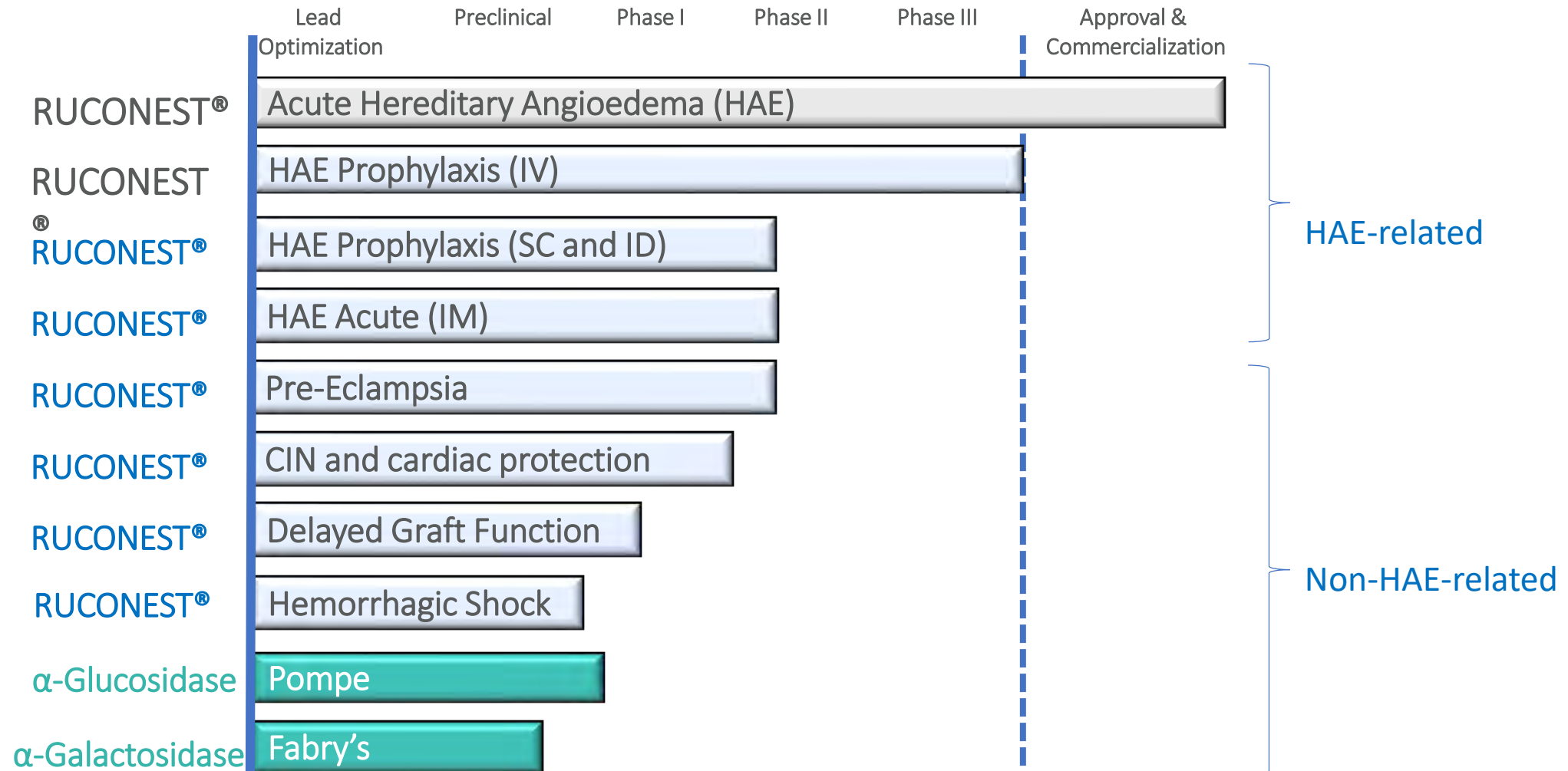
### Brand New IP:

- New Pharming patents filed in 2018 covering the new indications
- Patents cover all forms of rhC1INH

# Potential addressable future markets

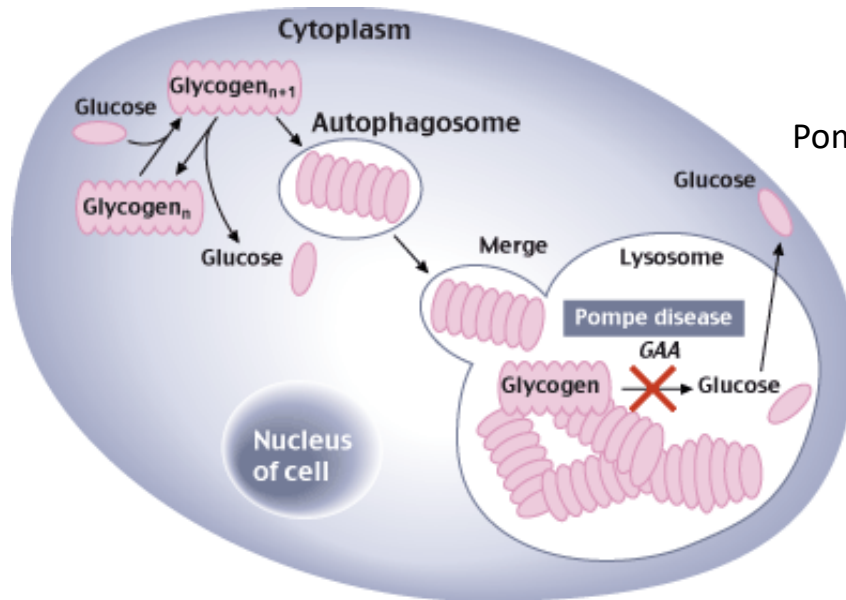


# Expansion of pipeline to multiple products and markets

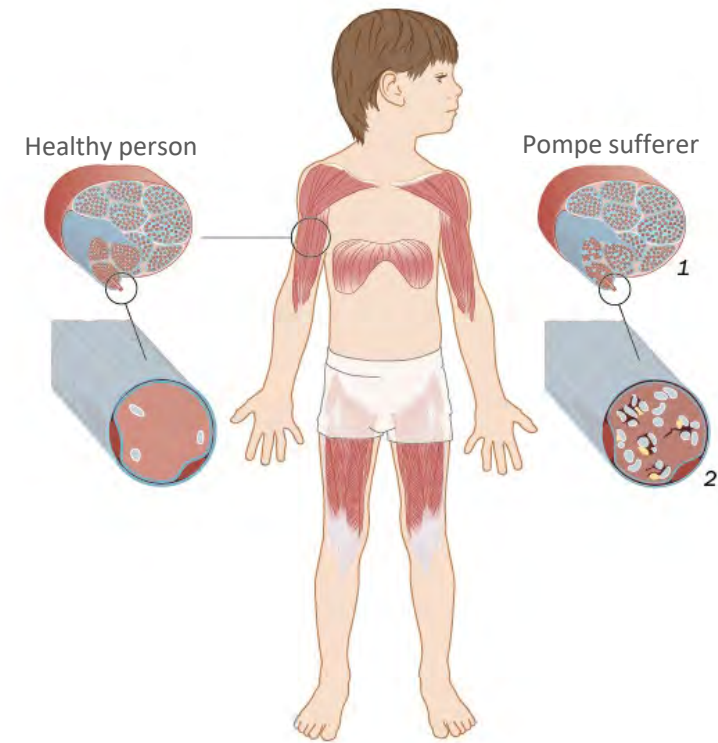


# Pompe diseases

Normal situation



Pompe disease



- Progressive decrease in muscle strength starting with the legs and moving to smaller muscles in the trunk and arms, such as the diaphragm and other muscles required for breathing
- Cardiac failure and respiratory failure are the most common causes of death



## $\alpha$ -glucosidase

Market potential for Pharming is over **\$1 billion per year** in each indication

- Attractive market:
  - All current products have severe shortcomings and **boxed warnings**, but together sell for over \$1 billion
  - Second generation products have their own shortcomings
  - Many patients are not on therapy because of **antibody formation or adverse reactions**
  - rhC1INH RUCONEST (equally highly-glycosylated) from our transgenic (rabbit) platform does **not generate relevant antibody responses**
  - A small 36-week clinical trial in infants with previous transgenic (rabbit-derived) rhaGLU showed good efficacy and did not report any safety concerns (2001)\*



## $\alpha$ -glucosidase

De novo proprietary constructs for our rabbit platform for rhaGLU have been developed and a new recombinant rhaGLU is being produced for initial clinical trial supplies

- New version is closer to **natural human GAA** than previous Pharming version, and also believed to be much closer than any other tested recombinant version to date
- $\alpha$ -glucosidase for Pompe disease now finalising last parts of manufacturing file and upscaling production to produce clinical trial material
- IND expected to begin 1H2019
- $\alpha$ -galactosidase for Fabry in mid preclinical development; expected to reach IND filing stage in 2020





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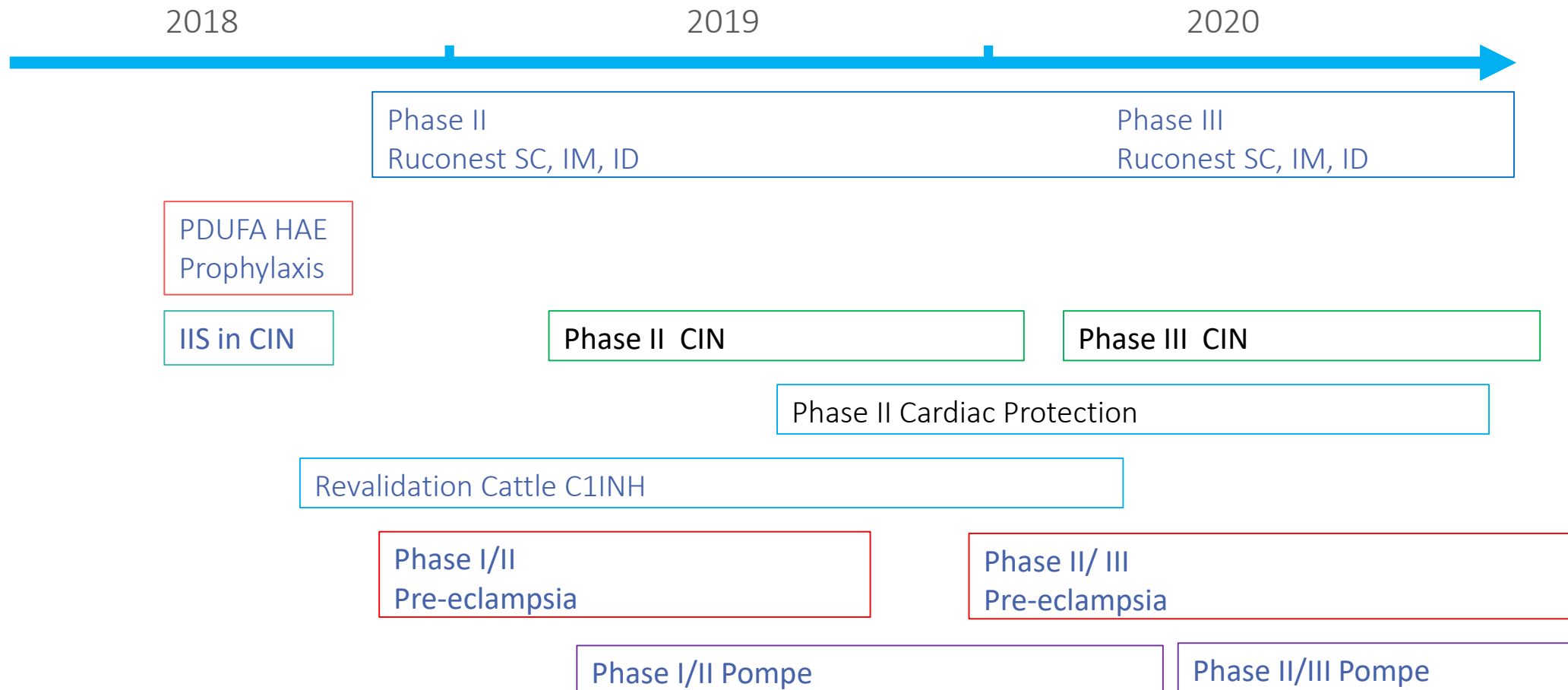


Add more products to sell


# Potential for significant newsflow over the coming years



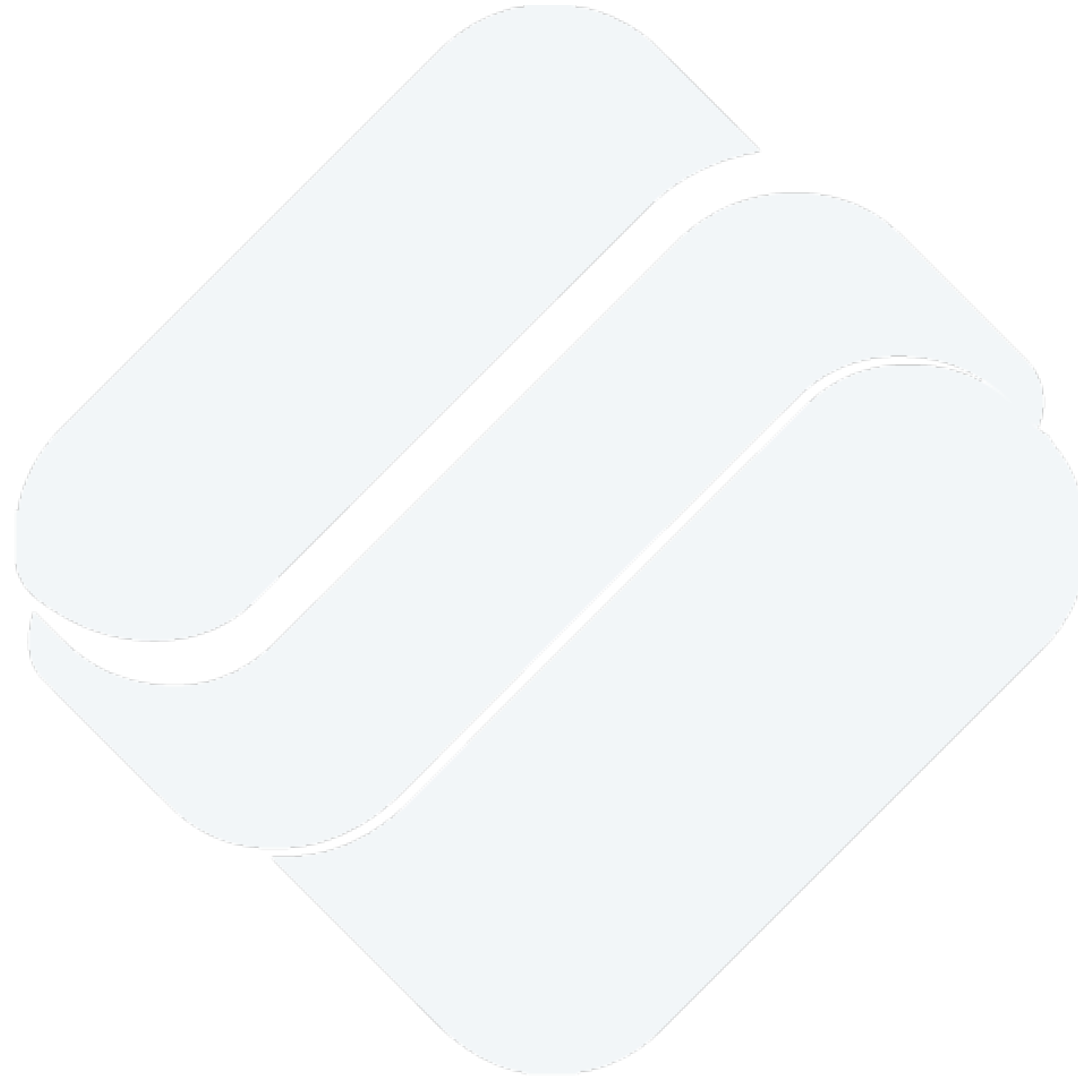
Assumed solely for purpose of diagram: positive results of studies



- Continued growth in sales of RUCONEST® driven by the US and EU operations
- Continuation of positive trend in operating results
- Continuation of positive Net Earnings during the year
- Continued investment in the expansion of production of RUCONEST
- Research and (Clinical) Development investments:
  - RUCONEST® in HAE (SC/ID/IM) with low volume vial trials
  - Clinical trials for additional indications for RUCONEST®
  - New pipeline: Clinical development Pompe disease early 2019
- Increasing marketing activity, such as opening new countries for RUCONEST®
- Continue to support all our marketing partners to maximize the sales and distribution potential of RUCONEST® for patients in all territories



Increasing  
sales and continued  
positive results



# Questions?

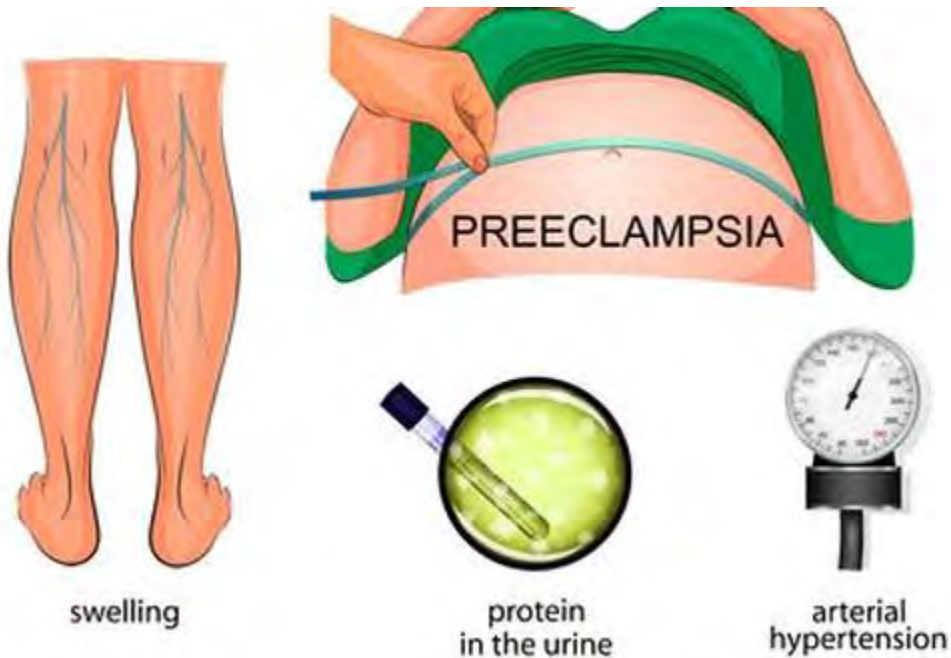


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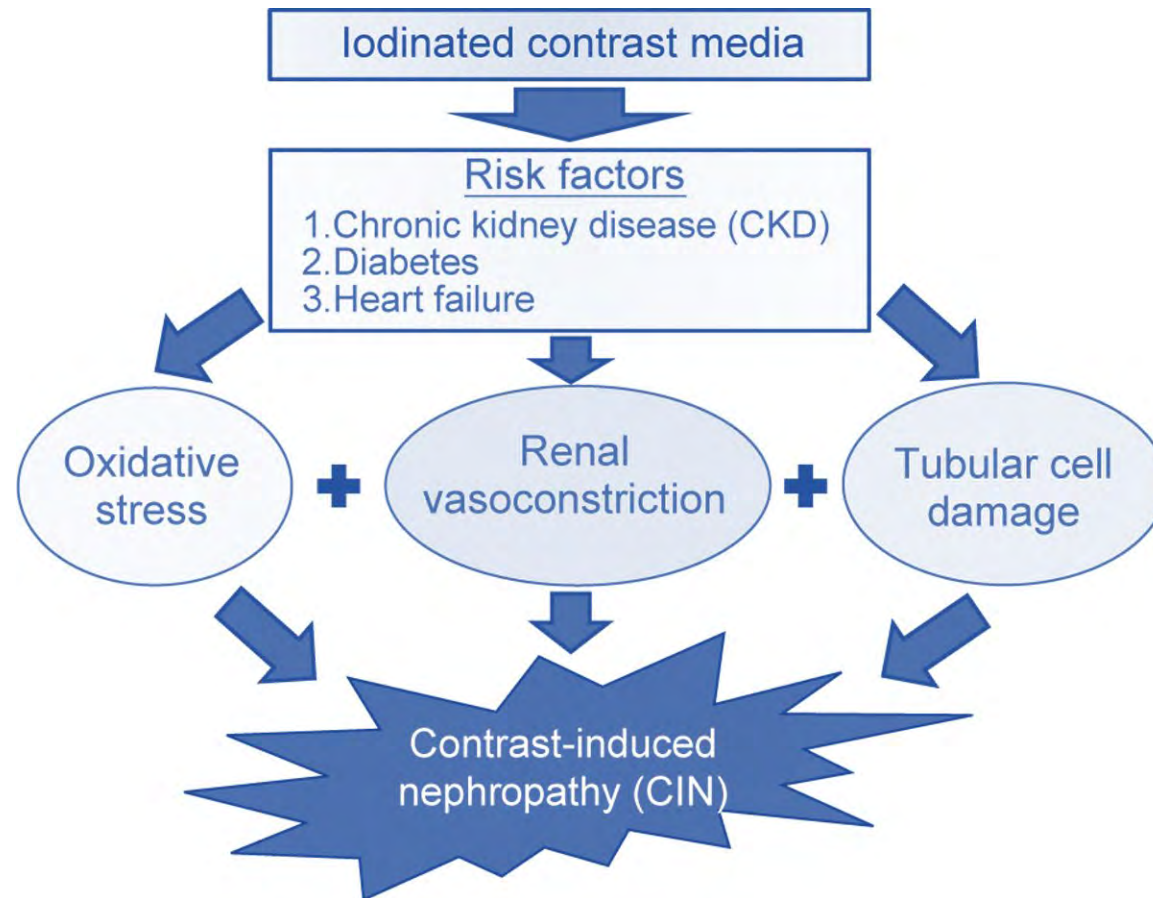
Tickers:  
ENXTAM: PHARM  
Bloomberg: PHAR.AS





- Pre-eclampsia (PE) is a disorder of pregnancy characterized by the onset of high blood pressure and often a significant amount of protein in the urine.
- When it arises, the condition begins after 20 weeks of pregnancy. In severe disease there may be red blood cell breakdown, a low blood platelet count, impaired liver function, kidney dysfunction, swelling, shortness of breath due to fluid in the lungs, or visual disturbances.
- Pre-eclampsia increases the risk of poor outcomes for both the mother and the baby. If left untreated, it may result in seizures at which point it is known as eclampsia.

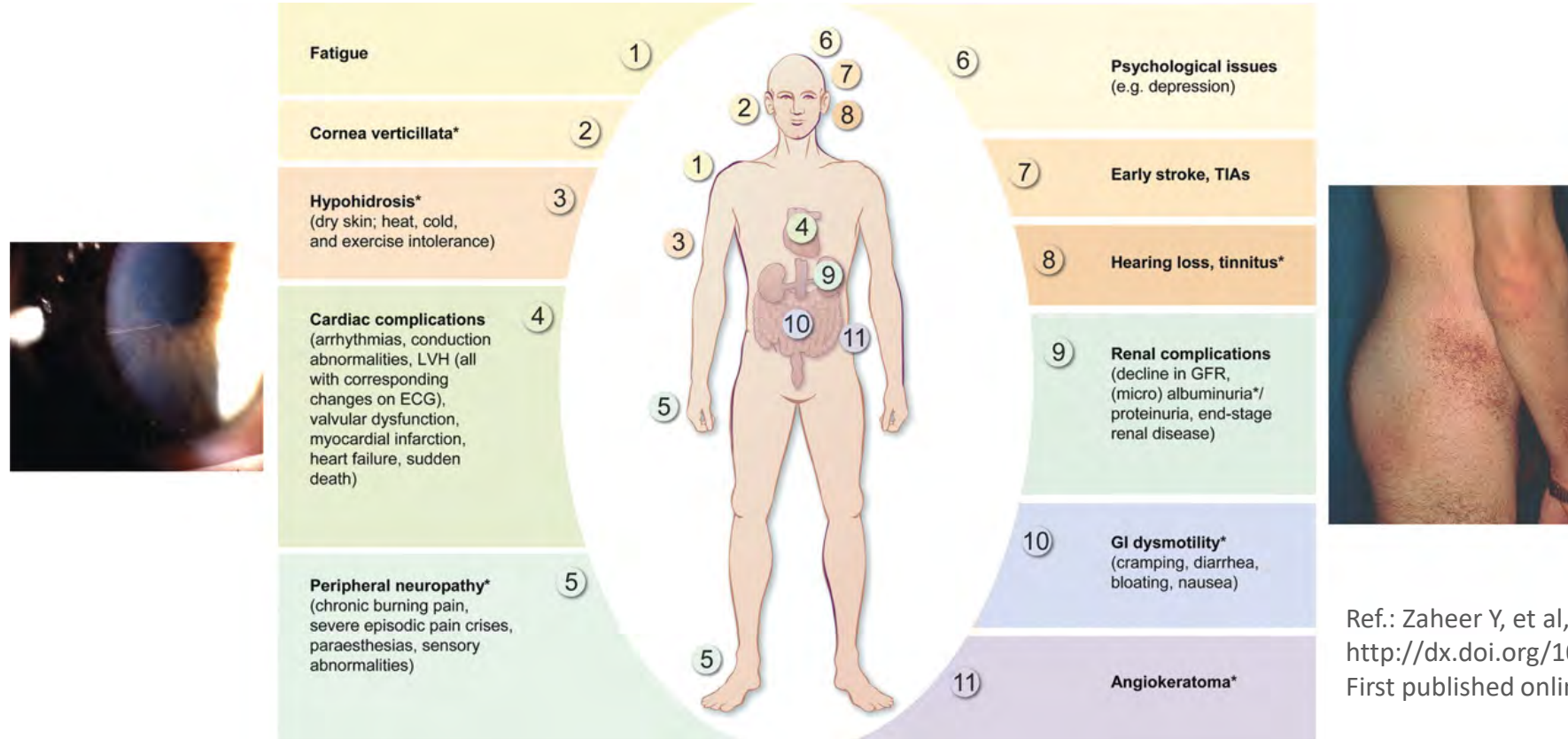
# New Activities with rhC1INH: Contrast Induced Nephropathy (CIN)



- (CIN) is a form of kidney damage in which there has been recent exposure to medical imaging contrast material without another clear cause for the acute kidney injury.



# Fabry's diseases



Ref.: Zaheer Y, et al,  
<http://dx.doi.org/10.1093/eurheartj/ehs166> 802-808  
First published online: 26 June 2012

Symptoms: renal dysfunction, cardiac abnormalities, cerebrovascular manifestations, dermatological signs, ocular and auditory symptoms, neurological symptoms