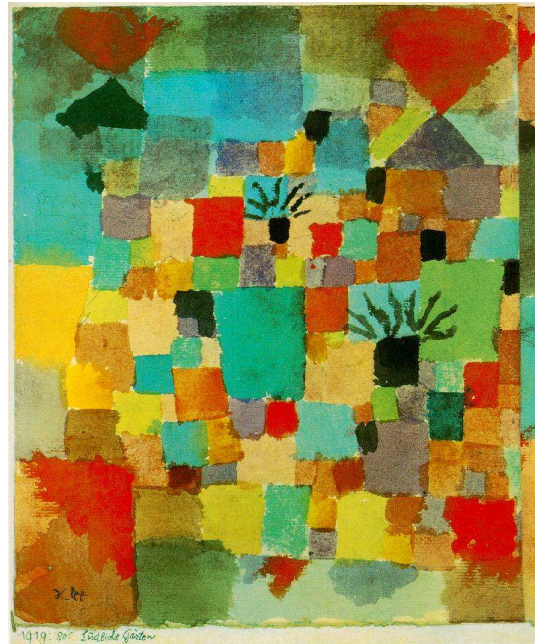


Digital Ulcers in Systemic Sclerosis

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Digital ulcers in SSc

- 1. Ulcers in medicine, we are not alone...**
- 2. Why ulcers in SSc ?**
- 3. Ulcers lights & shadows**
- 4. prevention vs healing ?**
- 5. The importance of local treatment**
- 6. Conclusions with tips and tricks**

Ulcers in Medicine

- Vasculitides
- CTDs
- Arthritides
- Atherosclerosis
- Buerger disease
- Bacterial infections
- Parasites
- Venous insufficiency
- Alterations of viscosity
- Crioglobulins
- others

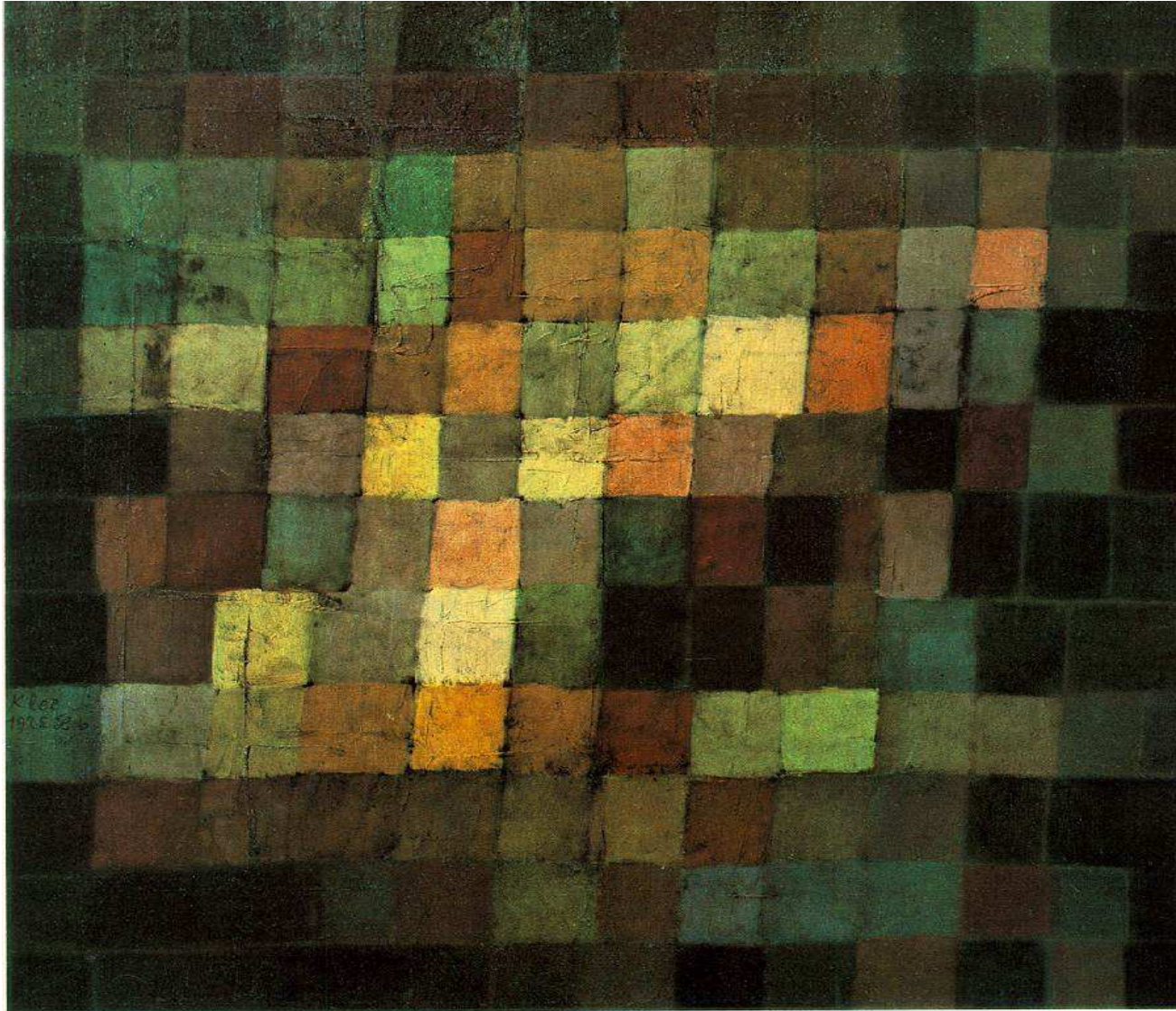


**S Gerolamo che medita sulla morte, Marinus van Reymerswaele
(1497-1567)**





Ulcers in SSc Lights & Shadows



DUO Registry: History of DU Complications reported at enrolment

	Diffuse SSc	Limited SSc	Overlap SSc/ mixed CTD
Soft tissue infection requiring systemic antibiotics, n/N* (%)	94/232 (40.5)	121/272 (44.5)	19/54 (35.2)
Gangrene, n/N* (%)	66/249 (26.5%)	97/279 (34.8%)	17/56 (30.4)
Osteomyelitis, n/N* (%)	11/247 (4.5)	11/281 (3.9)	–

*The denominator varies according to the number of available observations



DUO Registry: History of DU Interventions reported at enrolment

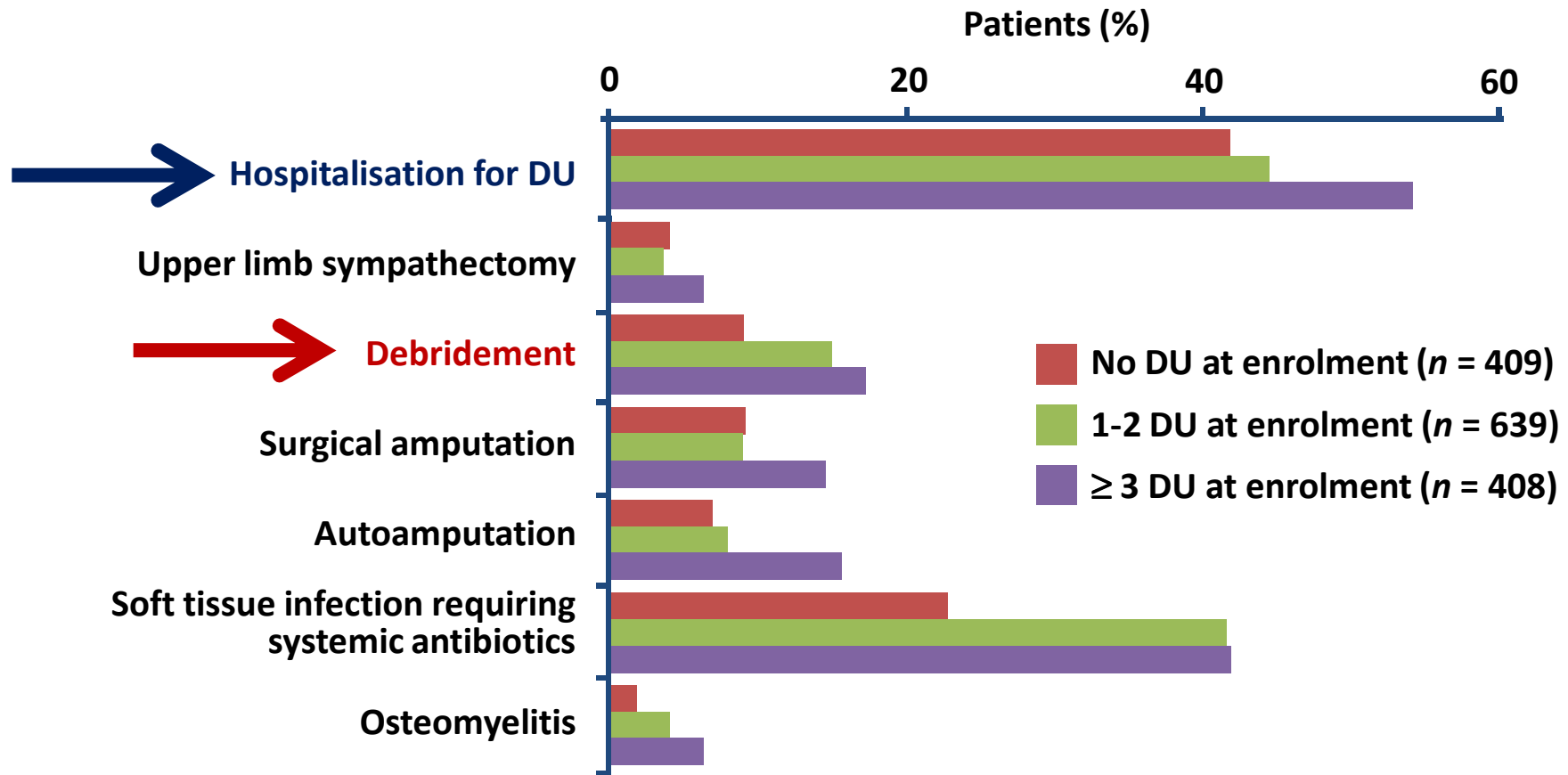
	Diffuse SSc	Limited SSc	Overlap SSc/ mixed CTD
Patients, n	273	313	60
Parenteral prostanoid use, n/N* (%)	153/233 (65.7)	187/257 (72.8)	39/54 (72.2)
Hospitalisation for DU, n/N* (%)	132/253 (52.2)	171/288 (59.4)	23/52 (44.2)
Upper limb sympathectomy, n/N* (%)	8/253 (3.4)	22/264 (8.3)	3/54 (5.6)
Digital sympathectomy, n/N* (%)	9/234 (3.8)	9/263 (3.4)	1/54 (1.9)
Arterial reconstruction, n/N* (%)	2/233 (0.9)	2/259 (0.8)	0/54 (0.0)
Arthrodesis, n/N* (%)	7/190 (3.7)	3/225 (1.3)	1/49 (2.0)
Amputation, n/N* (%)	21/194 (10.8)	39/231 (16.9)	5/50 (10.0)



*The denominator varies according to the number of available observations

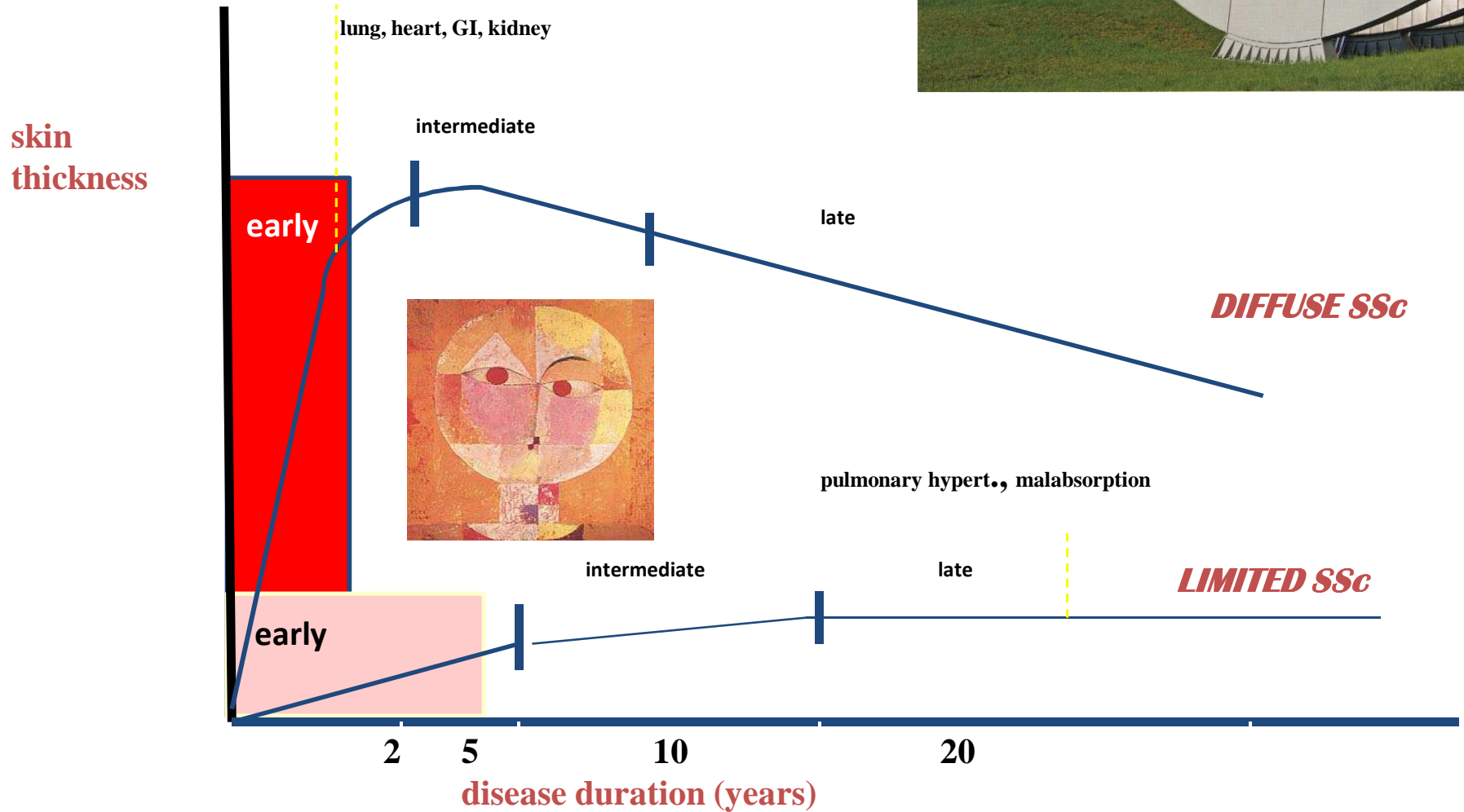


History* of interventions by number of DU



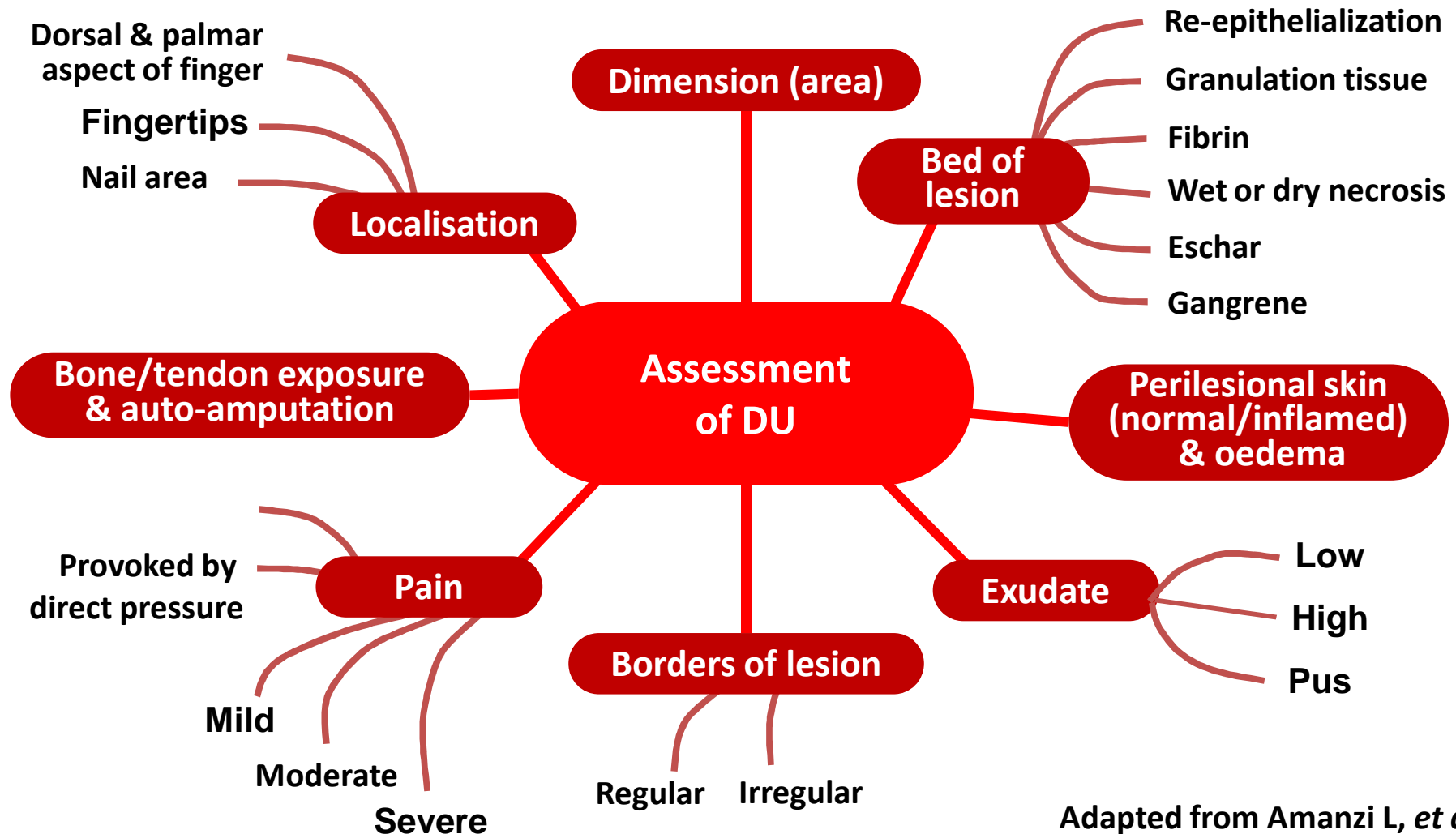
*Any time before enrolment visit

The disease evolution



Complexity of the Problem

Assessment of DU



Adapted from Amanzi L, *et al.*
Rheumatology 2010; 49:1374-82.





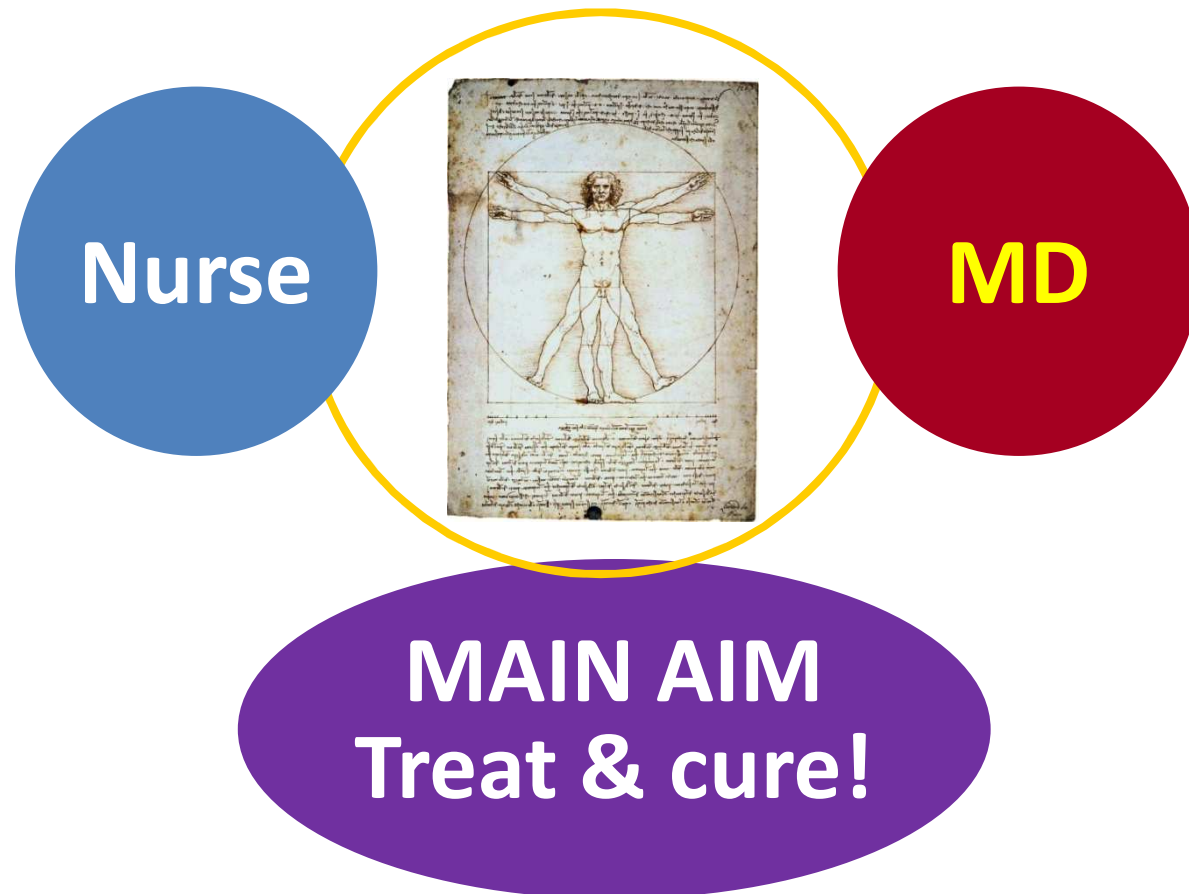
**Vincent van
Gogh**

**Portrait of doctor
Gachet - 1890**

What do we need to manage DU in SSc ?

Team work

- 1.
- 2.



«Prevention»

Patient education

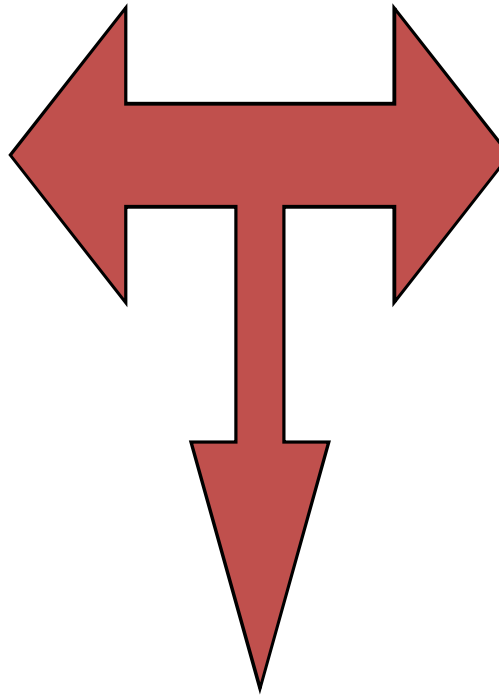
1. Skin protection
2. Skin hydration
3. Adequate nutrition
4. Rehabilitation
5. Quit smoking



Optimal management of DUs: «*Prevention vs healing*»

Healing

- Typically requires hospitalisation or intensive therapy (dressings, etc.)
- May result in deformity/disability
- Persistent/refractory nature of DUs



Prevention

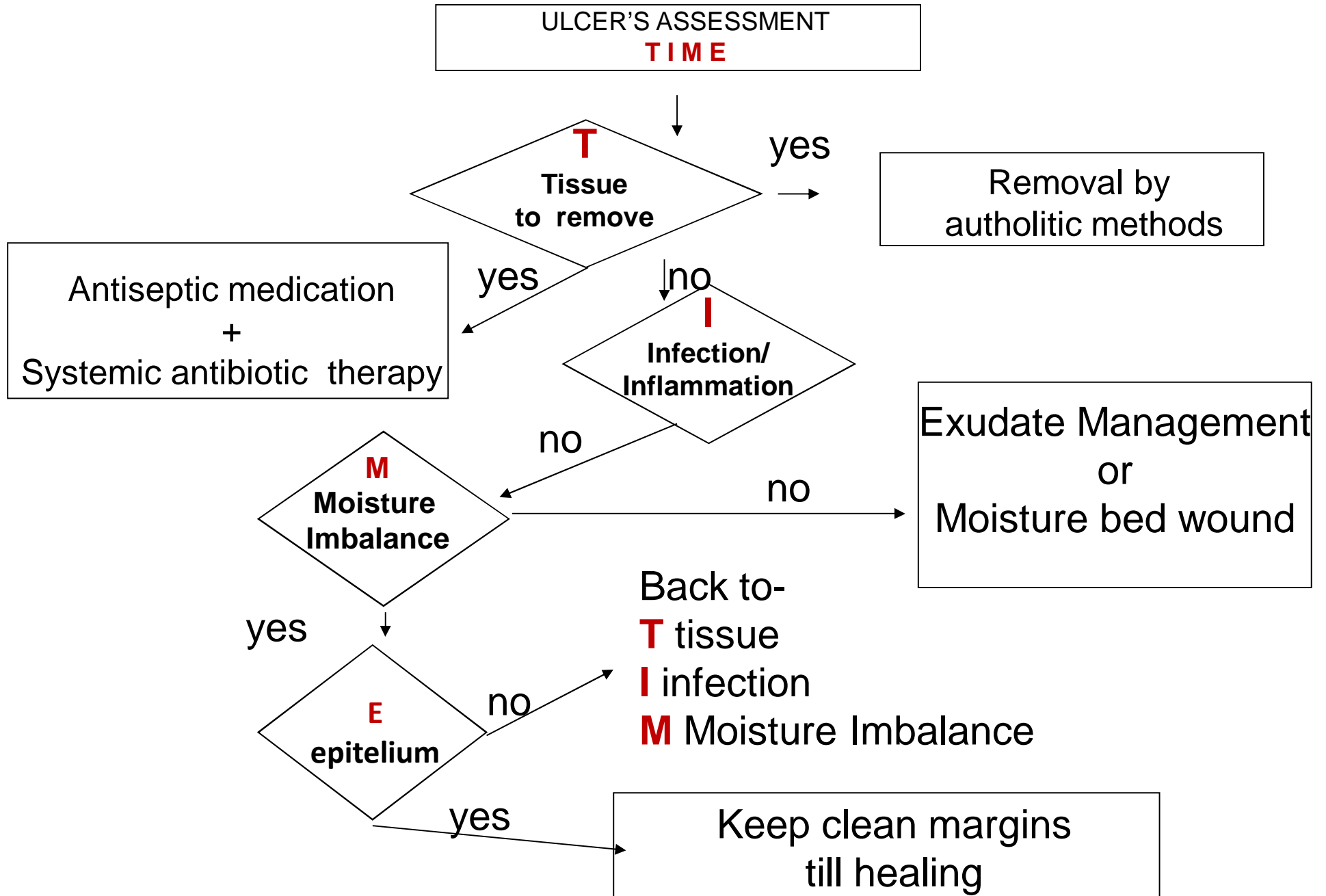
- Rate of complications, e.g. infections, increases with disease duration
- Development of therapies that target underlying vasculopathy



What do we need to manage DU in SSc? «Local Treatment»

1. Cleanse/irrigate with physiological solution with a 10 ml syringe and 18 g calibre needle using a “vortex” technique
2. Disinfect with 5% sodium hypochlorite (chlorine) leave to interact for few seconds, followed by immediate rinsing with physiological solution
3. Curettage with scalpel if eschar present
4. Application locally of drug
5. Application of “hydrogel” (tube and/or gauze) and cover with paraffin gauze
6. Dress the lesion

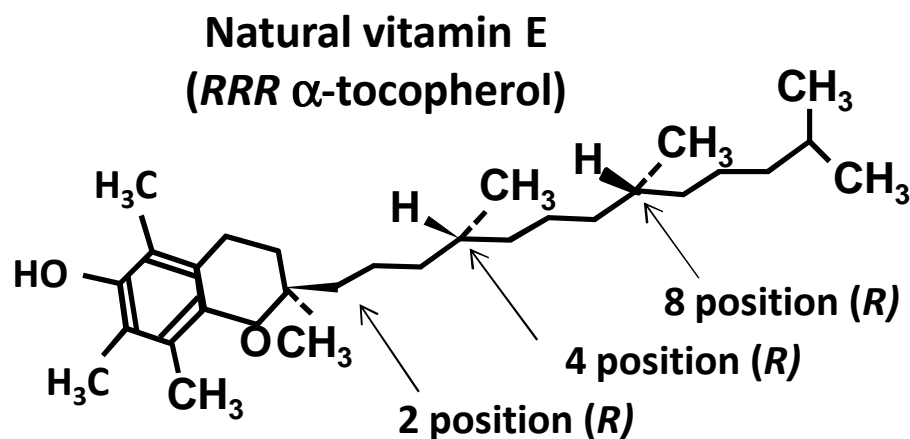
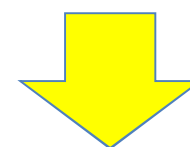
Clinical approach to Digital Ulcers



Local treatment

1.

1. Platelet gel
2. Disinfection
3. Vitamin C
4. Vitamin cocktail
5. Vitamin E gel



RRR refers to *R* at the 2, 4 & 8 positions

Vitamin E gel reduces time to healing of DU in SSc

Fiori et Clin Exp Rheumatol

Clinical burden of DU in SSc

- Healing slow: 105 ± 97 days
- Mean incidence of infection 9.5 per 100 patient-years
- Mean incidence of finger amputations 1.2 per 100 patient-years
- Recurrence occurs despite vasodilator use

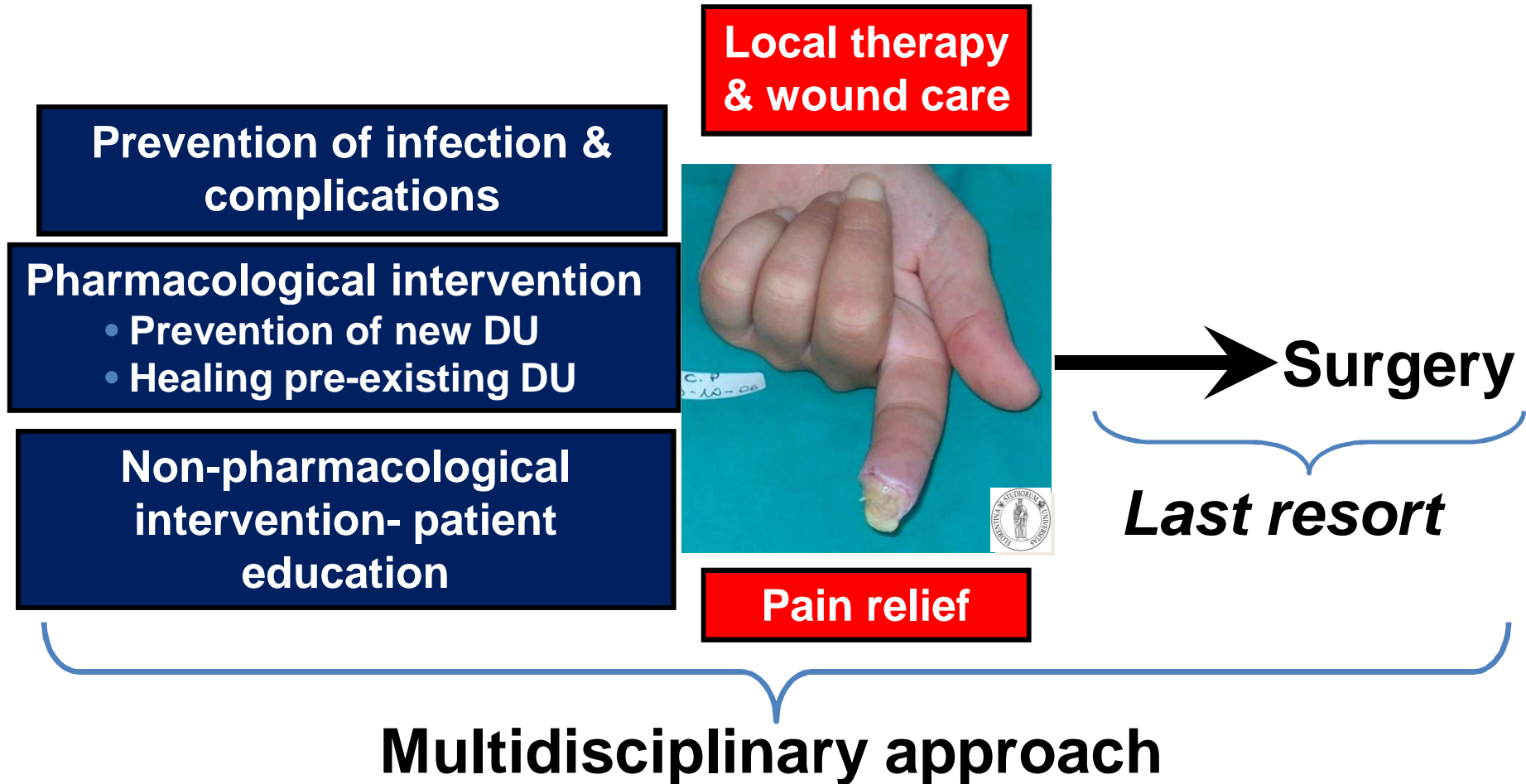


**Need for preventative treatment
other than vasodilators**

Drugs & Prevention...

- **Disease modifying therapy- block the disease evolution**
 - Cyclophosphamide
 - Azathioprine
 - Methotrexate
 - Micofenolate
 - autologous stem cell transplantation
- **Symptomatic treatment- alleviate symptoms (pain et al)**
- **Vasodilating therapy - Raynaud & Ulcers**
 - CCB
 - Prostanoids
 - Sildenafil
- **Prevention- *Ulcers***
 - Bosentan

Comprehensive management of DU



Tips & tricks- *the Trilogy*

I. Protection

- Gloves
- Creams
- Nutrition

II. Systemic Treatment

- Fight the disease
- Prevent and treat ulcers

III. Local care

Early Phase



Many Faces of SSc !!!!

Strike the iron when it is hot !!

Oedema



Fibrosis



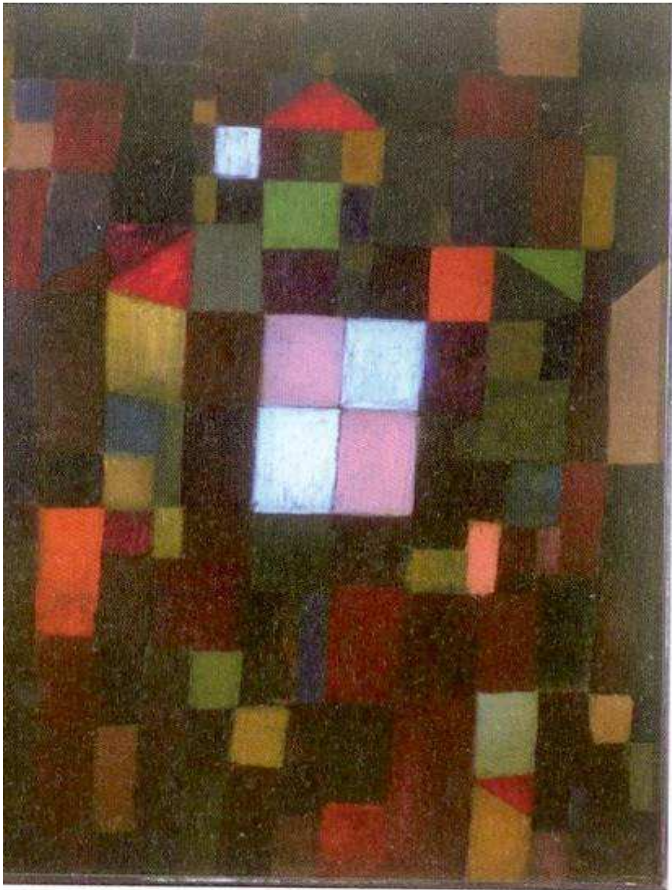
Advanced
phase



Atrophy



The window of opportunity...!!!



Paul Klee
La finestra

**Education is of
paramount
importance !!!!!!!!**

