

Anti-aging Study

Title of Study:

**Cosmetic treatment of aged skin with
Dermatopoietin®-Plus**

Study design:

Randomized, double-blind, placebo-controlled study in 22 healthy female volunteers (51 ± 6 y). 44 forearms from 22 subjects were randomly assigned to receive application of test article or placebo for 8 weeks. If the left forearm was assigned to placebo group, then the right forearm of the volunteer was assigned to the verum group. Measurements were performed at baseline (day 0), day 28, and day 56.

Test article:

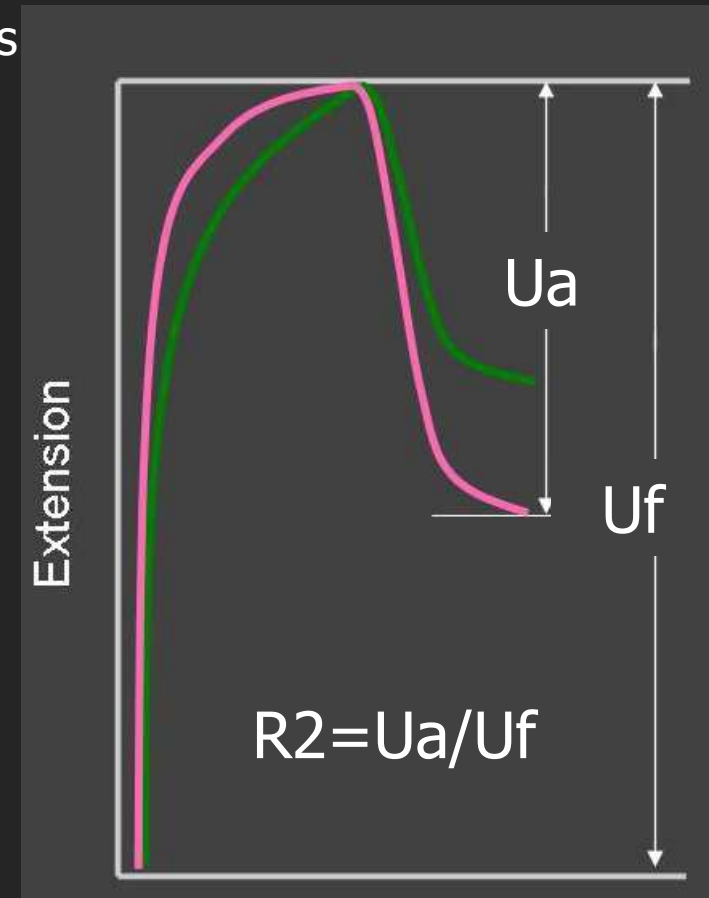
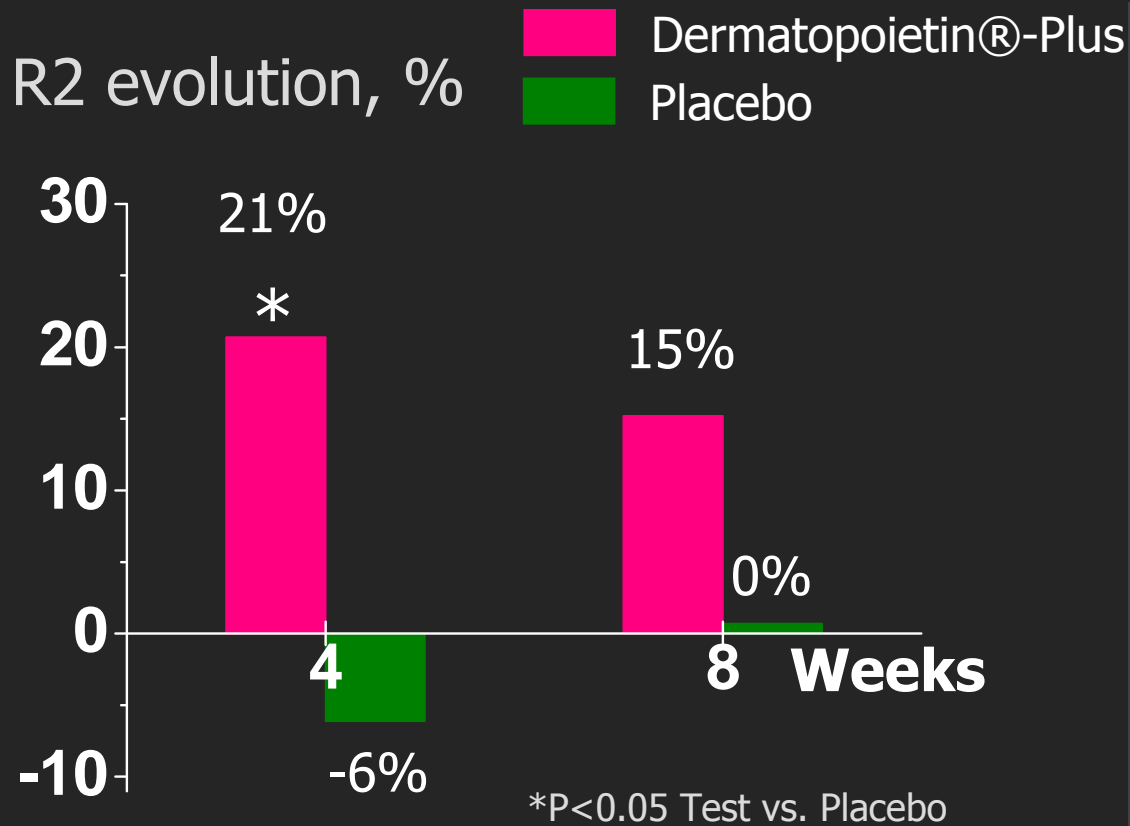
Topical cream comprising the **Dermatopoietin®** (rh-Polypeptide-17) and Hexapeptide-18

Study performance:

Dr. Alain Béguin, Skin Test Institute, c/o Intercosmetica Neuchâtel S.A. 2008 Neuchâtel, Switzerland

Dermatopoietin®-Plus increases overall skin elasticity

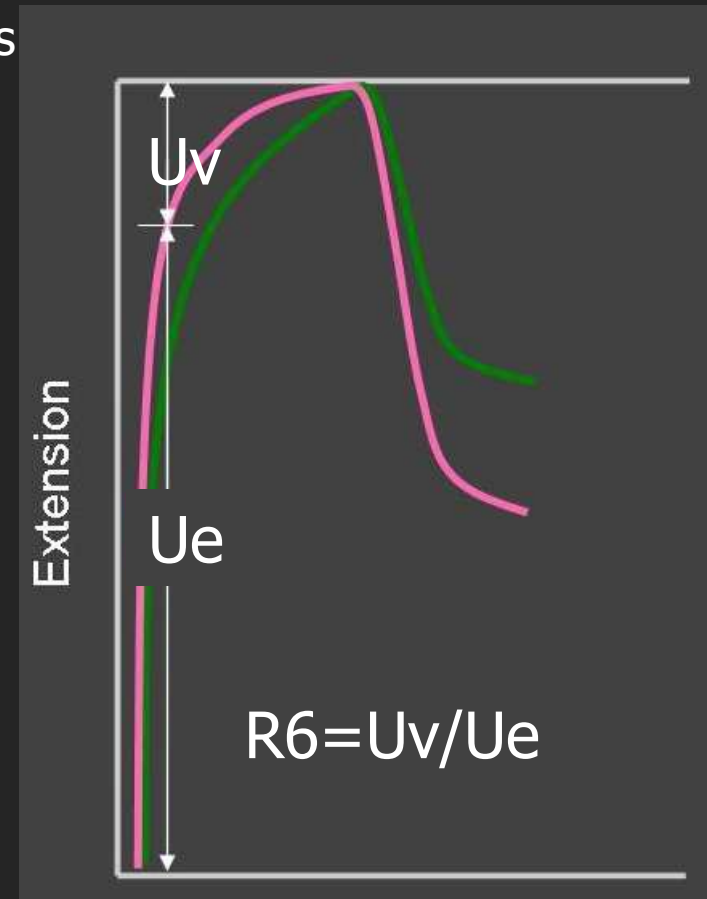
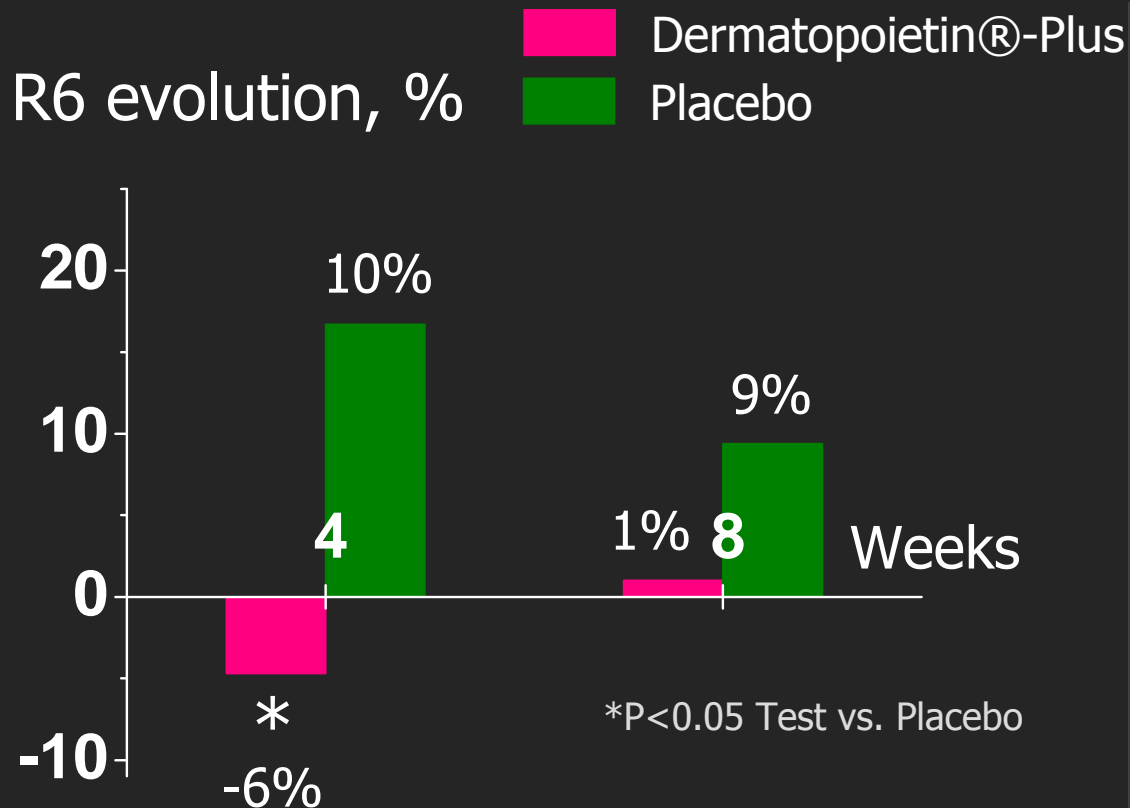
The overall elasticity of skin significantly decreases with age.
Ryu HS et al., Skin Research and Technology. 2008, 14(3): 354-358.



$$R2 \text{ evolution} = (R2 - R2_0) / R2_0$$

Dermatopietin®-Plus decreases the viscoelastic portion

The viscoelastic portion of the overall elasticity significantly increases with age. *Ryu HS et al., Skin Research and Technology. 2008, 14(3): 354-358.*



$$R6 \text{ evolution} = (R6 - R6_0) / R6_0$$

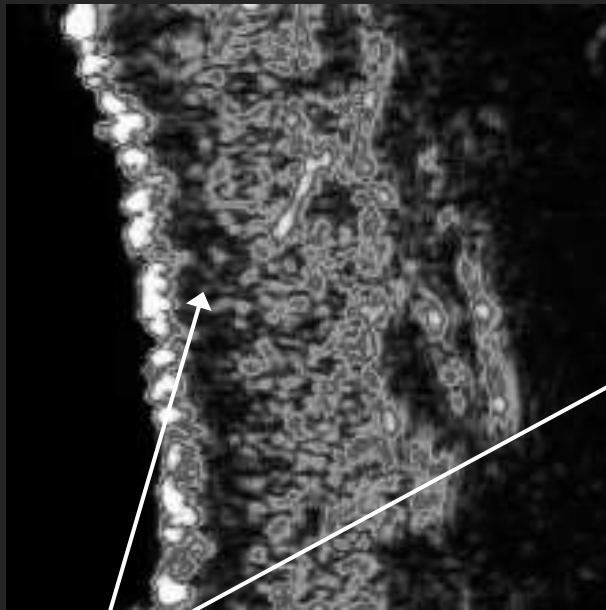
Ultrasonography at 20-MHz frequency

Skin architecture visualization technique:

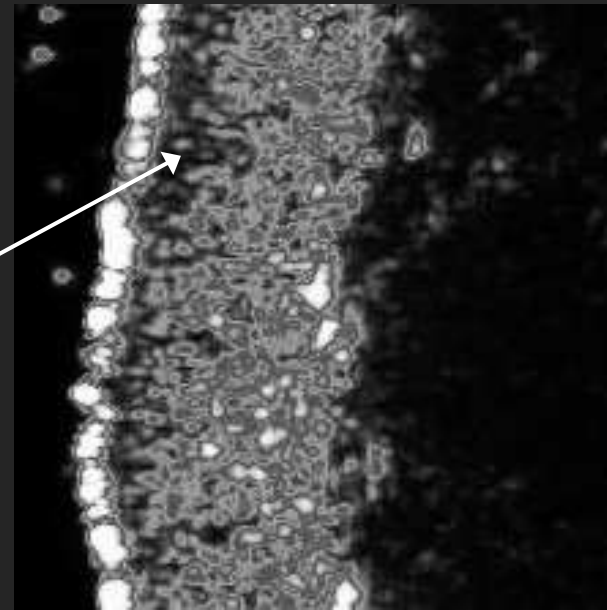
Dark pixels: low echogenic areas, e.g. fat and water

Bright pixels: fibrous network, e.g. collagen and elastin

Untreated



Dermatopoietin®-Plus treated

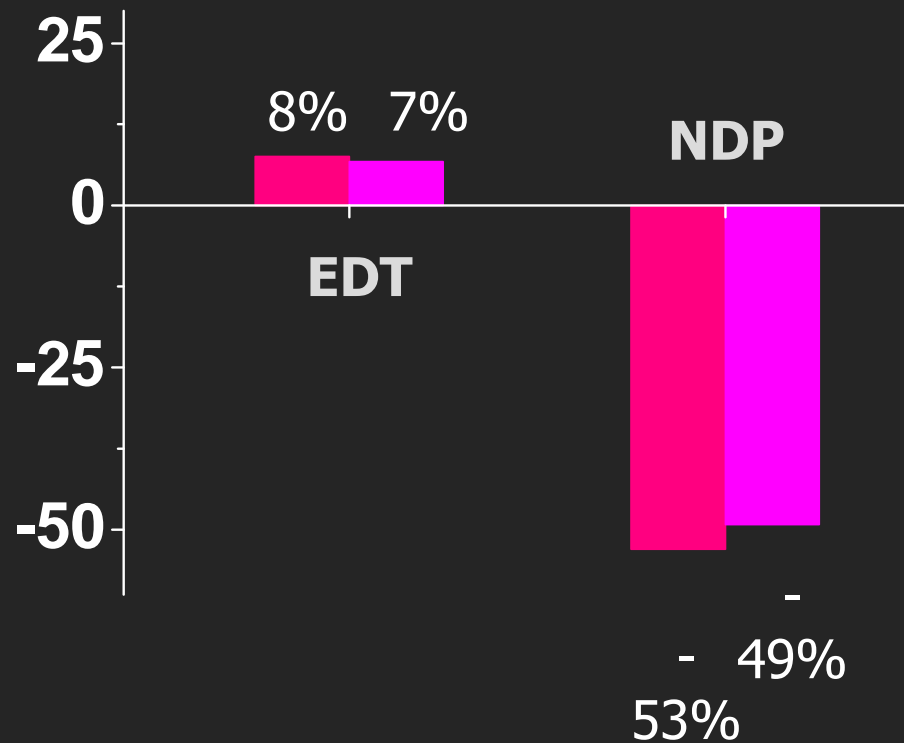


SLEB: subepidermal low echogenic band, a reliable marker of skin aging or photoaging.

Gniadecka, Skin research and technology, 7(3): 204

DermatoPoietin®-Plus decreases SLEB

Evolution, %



Legend:

EDT: Epidermis + Dermis Thickness;

NDP: Number of Dark Pixels (SLEB)

$$\text{Evolution} = (T - T_0) / T_0, \%$$

■ 4-week treatment

■ 8-week treatment

Conclusions

Dermatopoietin®-Plus significantly improved elastic properties of aged skin at the 4th week of the study compared to placebo:

- (i) overall skin increase of elasticity by 26,8%
- (ii) decrease of viscoelastic portion of elasticity by 21,4%

Dermatopoietin®-Plus significantly improved collagen-elastin network in aged skin. On ultrasonograms the number of dark pixels in dermis (= fat and water) decreased by 53% at the 4th week of the study.

Dermatopoietin®-Plus reduced SLEB (subepidermal low echogenic band), a reliable marker of aged skin indicating loss of collagen-elastin in subepidermal area of aged skin (see Attachment).

Dermatopoietin®-Plus significantly improved skin moisture as compared to placebo.

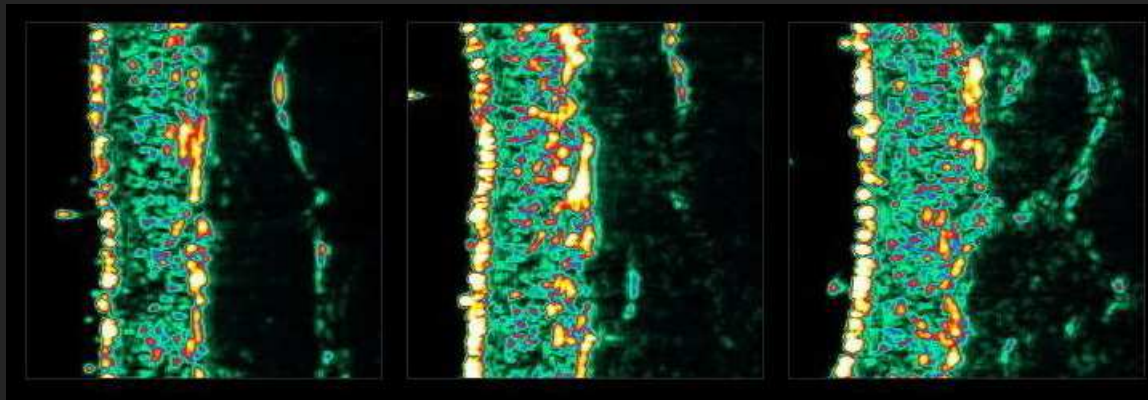
Day 0

Day 28

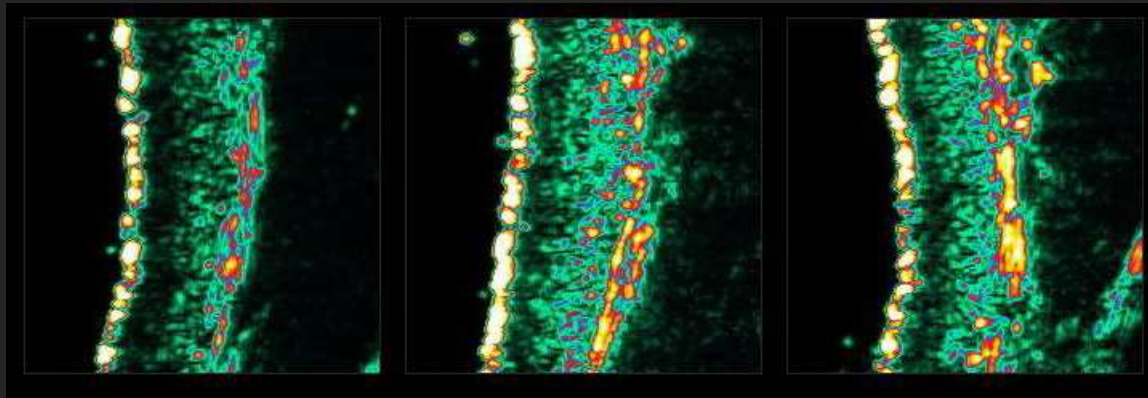
Day 56

Attachment

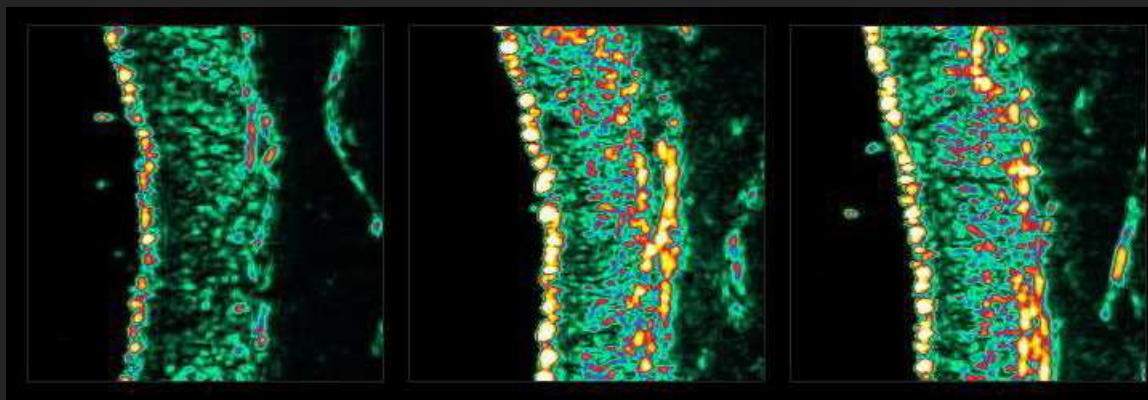
#1



#2



#3



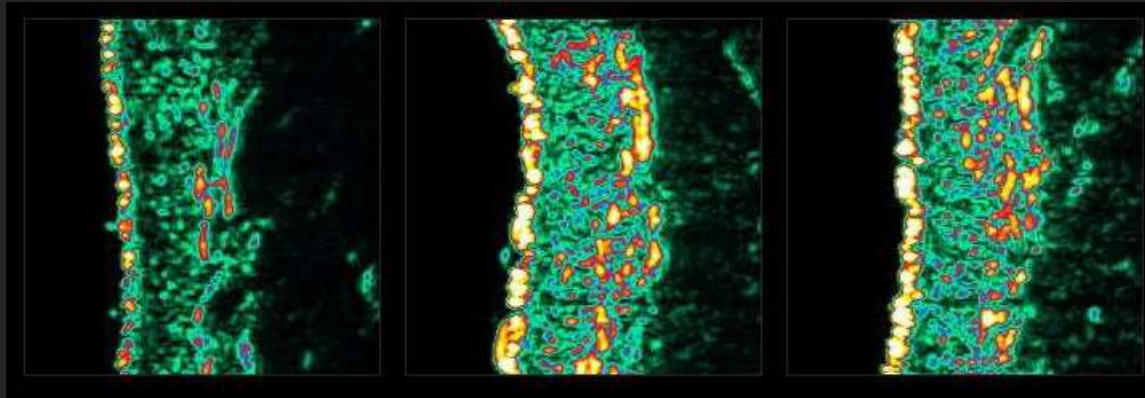
Day 0

Day 28

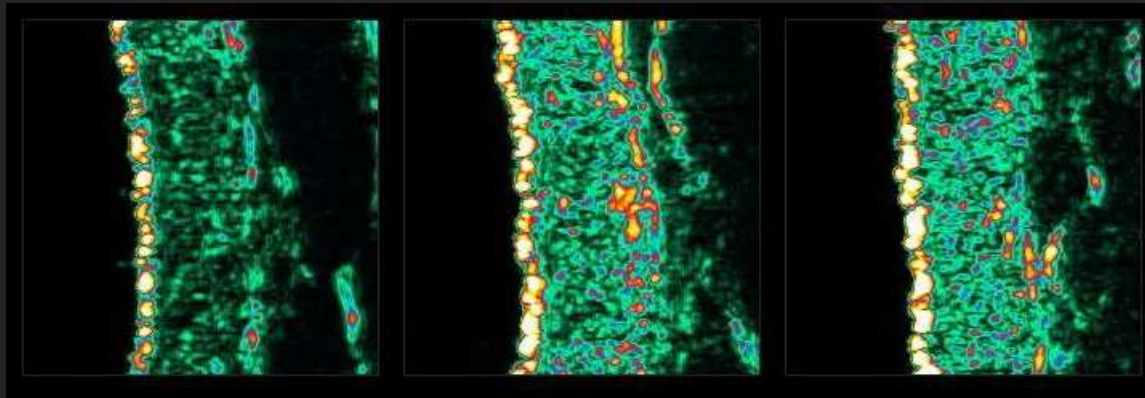
Day 56

Attachment

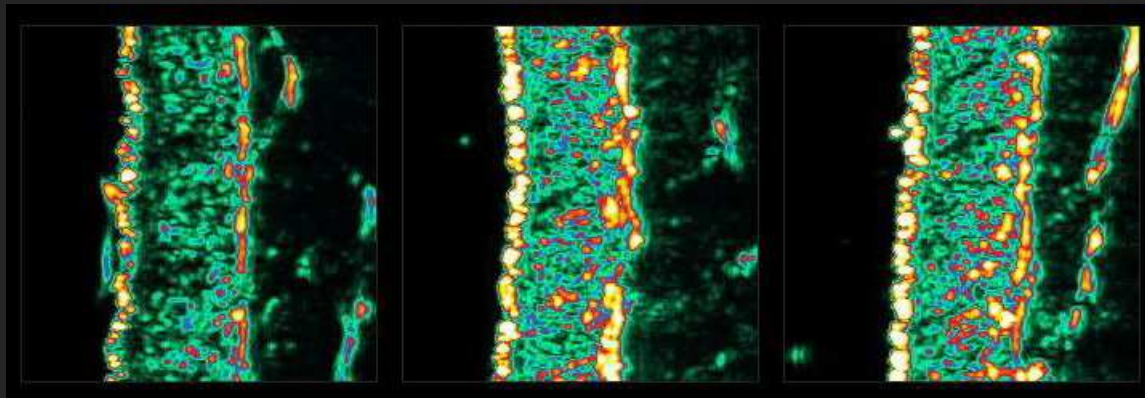
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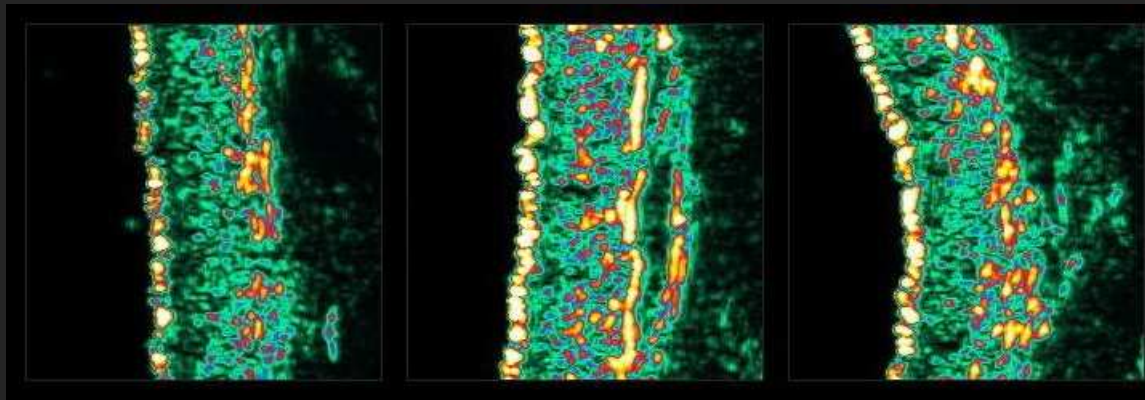
Day 0

Day 28

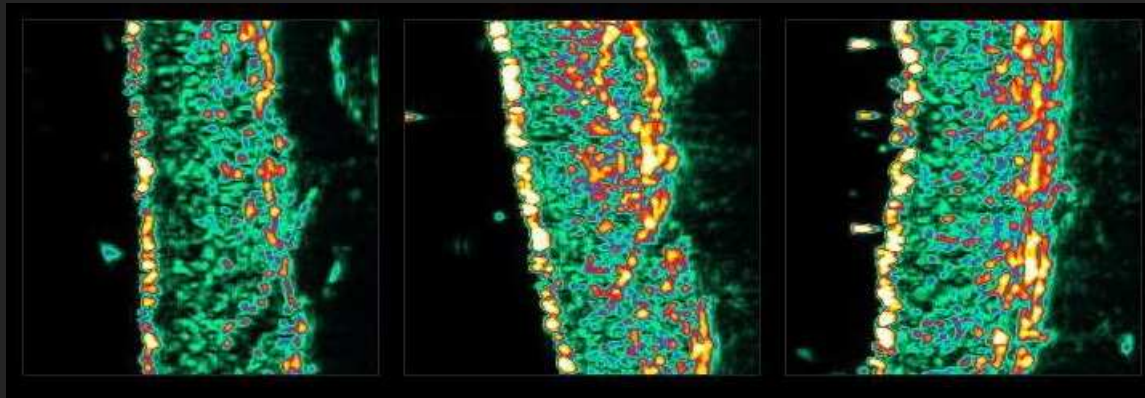
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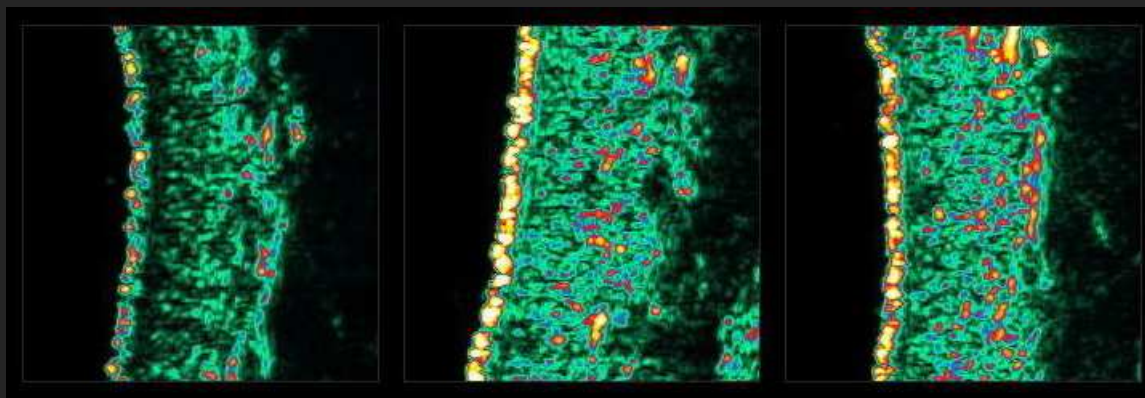
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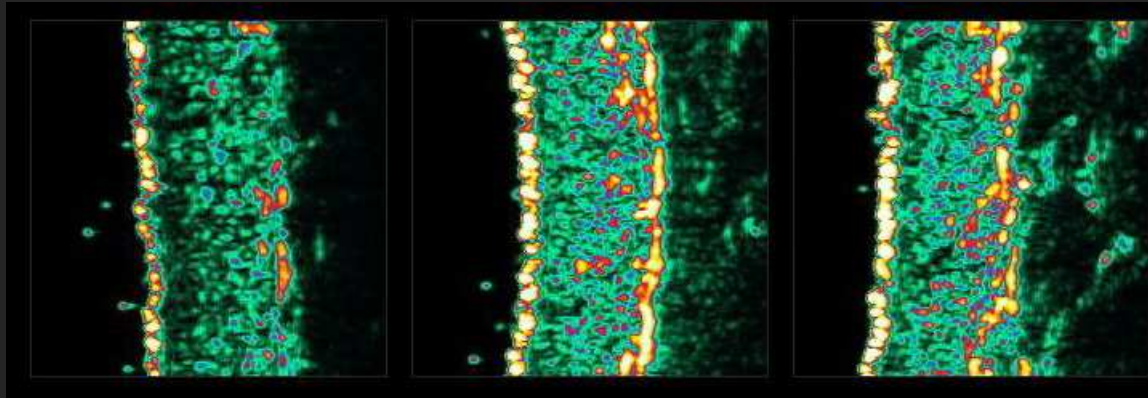
Day 0

Day 28

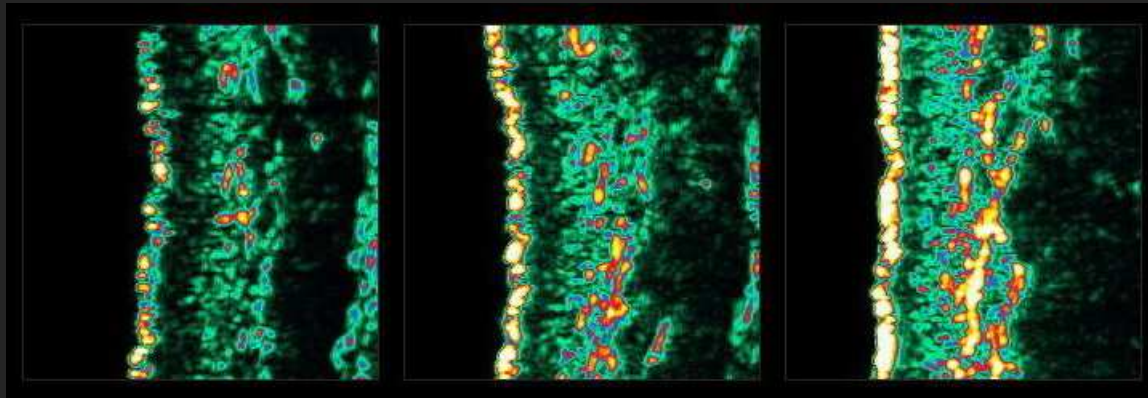
Day 56

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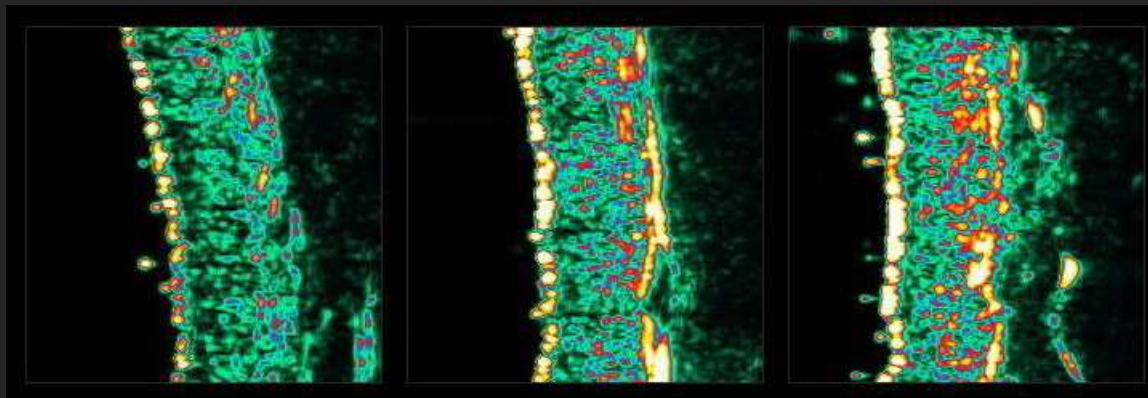
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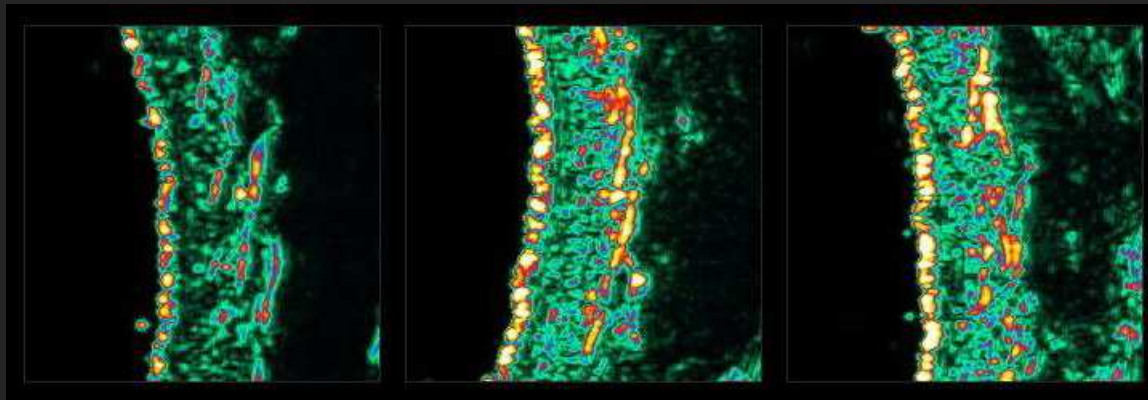
Day 0

Day 28

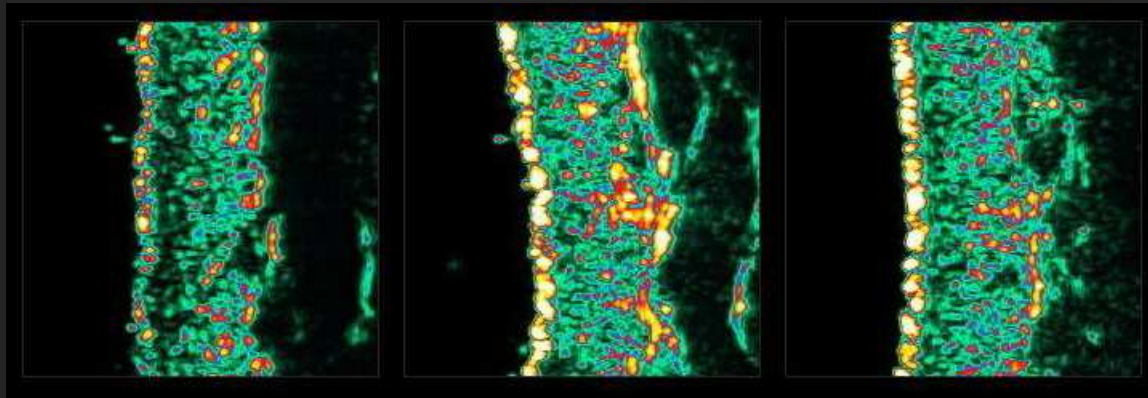
Day 56

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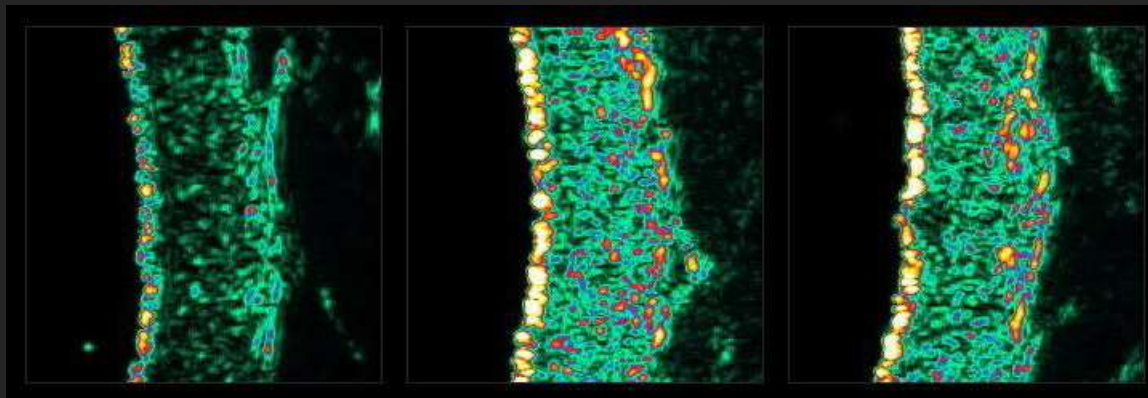
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#14



#15



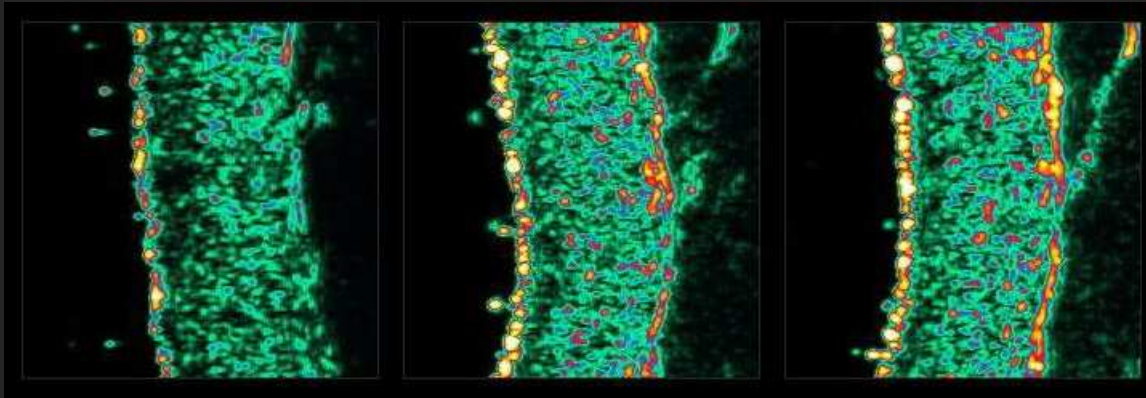
Day 0

Day 28

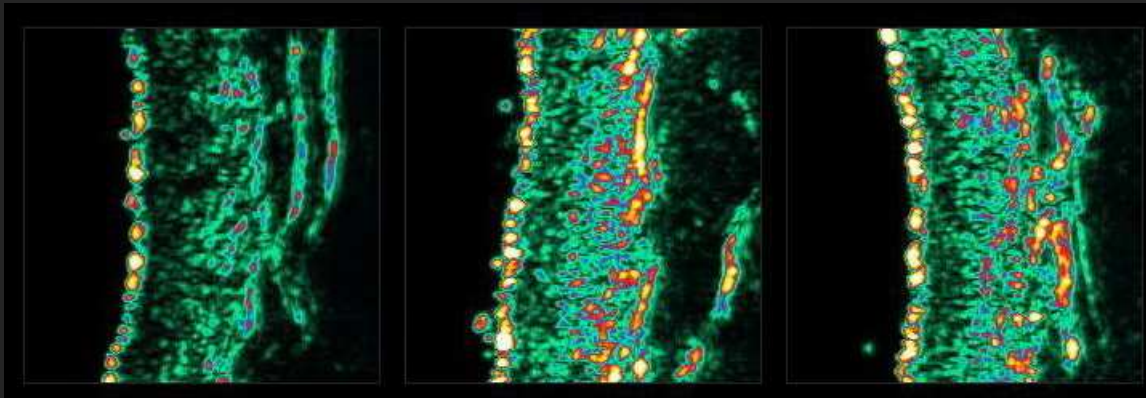
Day 56

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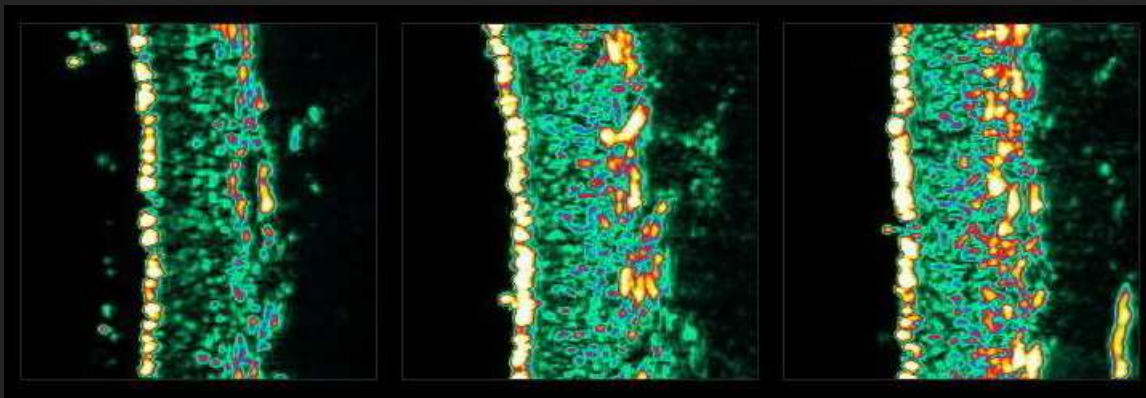
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#17



#18



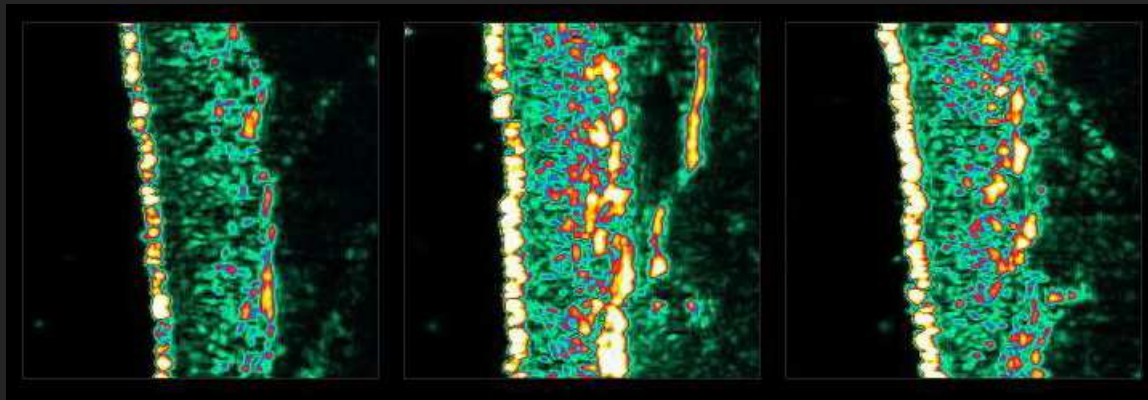
Day 0

Day 28

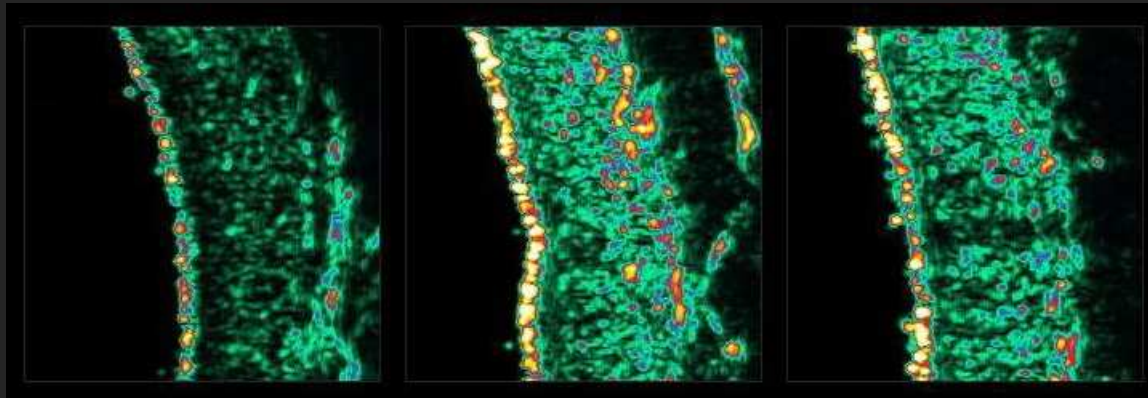
Day 56

Attachment

#19



#20



#21

