



Stadtspital Zürich

ACNE INVERSA

DERMATOLOGISTS' PERSPECTIVE

ROBERT A. DAHMEN
BERN, 27.01.2024



Stadtspital Zürich

HIDRADENITIS SUPPURATIVA

DERMATOLOGISTS' PERSPECTIVE

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An Angel Leading a Soul into Hell
Hieronymus Bosch (c. 1450–1516)

Diagnosis	DLQI Mean ± SD
All patients ^c	6.73 ± 6.8
1 Blistering conditions	8.59 ± 7.4
2 Allergic, drug, phototoxic/-allergic reactions	5.29 ± 4.3
3 Psoriasis	9.14 ± 7.6
4 Vasculitis and immunological ulcers ^d	7.06 ± 6.1
5 Atopic dermatitis	11.53 ± 7.2
6 Vitiligo	3.83 ± 3.7
7 Venous leg ulcers	9.45 ± 7.3
8 Other hair disorders ^e	5.01 ± 5.4
9 Prurigo	11.44 ± 8.2
10 Scars, fibrosis of the skin, morphea	5.3 ± 4.8
11 Papulosquamous skin diseases ^f	6.37 ± 6.4
12 Connective tissue disease	7.81 ± 7.0
13 Oral conditions ^g	6.77 ± 6.6
14 Eczema	8.42 ± 7.2
15 Urticaria	9.59 ± 6.7
16 Hand eczema	8.51 ± 7.2
17 Alopecia areata	5.58 ± 6.8
18 Pruritus	10.97 ± 7.1
19 Non-melanoma skin cancer and actinic keratosis	2.37 ± 5.0
20 Genital (non-venereal) ^h	8.81 ± 6.4
21 Other ⁱ	6.34 ± 6.6
22 Hidradenitis suppurativa	12.7 ± 7.6
23 Infections of the skin	6.24 ± 5.8
24 Benign skin tumours	2.72 ± 3.7
25 Lichen planus	6.09 ± 5.4
26 Seborrhoeic dermatitis	6.28 ± 4.4
27 Psychodermatological conditions	8.5 ± 7.1
28 Acne	6.21 ± 5.2
29 Rosacea	5.37 ± 5.3
30 Naevi	1.52 ± 2.9
31 Malignant melanoma	2.72 ± 4.4
32 Melasma, pigment disorders	4.97 ± 4.7

WORST QUALITY OF LIFE

1. ACNE INVERSA
2. ATOPIC DERMATITIS
3. PRURIGO
4. PRURITUS
5. URTICARIA



PREVALENCE: 0.7-1.2 %

Nguyen TV, Damiani G, Orenstein LAV, Hamzavi I, Jemec GB. Hidradenitis suppurativa: an update on epidemiology, phenotypes, diagnosis, pathogenesis, comorbidities and quality of life. *J Eur Acad Dermatol Venereol.* 2021 Jan;35(1):50-61. doi: 10.1111/jdv.16677. Epub 2020 Jul 16. PMID: 32460374.



PREVALENCE: 0.7-1.2 %



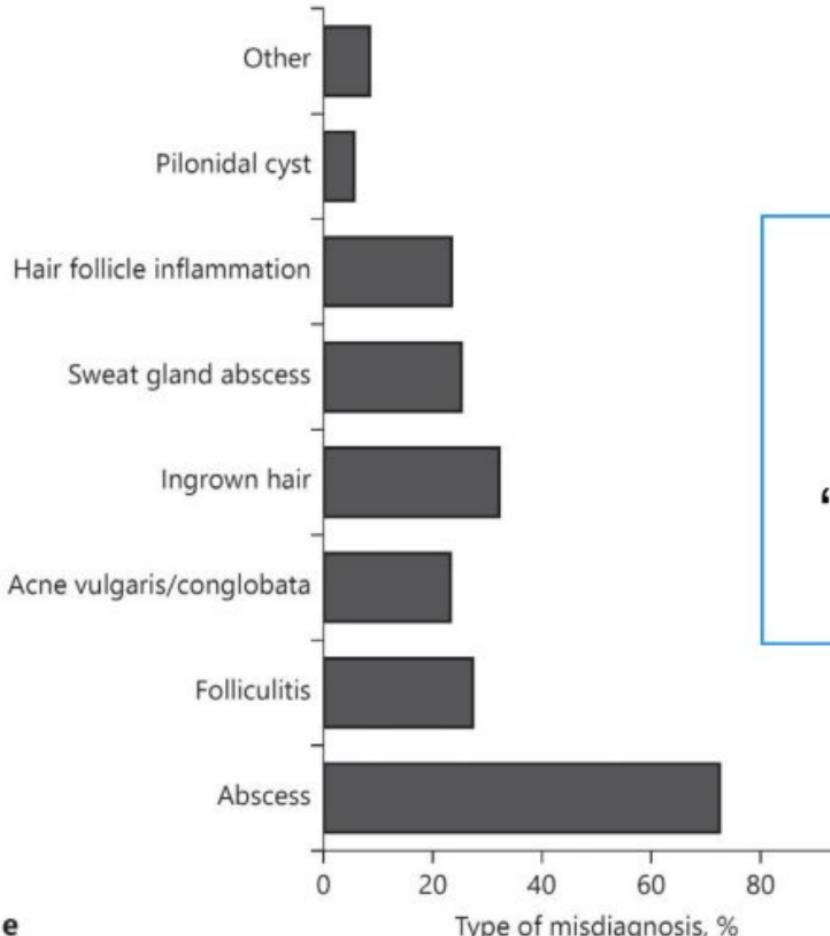
Nguyen TV, Damiani G, Orenstein LAV, Hamzavi I, Jemec GB. Hidradenitis suppurativa: an update on epidemiology, phenotypes, diagnosis, pathogenesis, comorbidities and quality of life. *J Eur Acad Dermatol Venereol*. 2021 Jan;35(1):50-61. doi: 10.1111/jdv.16677. Epub 2020 Jul 16. PMID: 32460374.

Delayed Diagnosis of Hidradenitis Suppurativa and Its Effect on Patients and Healthcare System

Georgios Kokolakis^{a, b} Kerstin Wolk^{a-c} Sylke Schneider-Burrus^{a, d}
Stefanie Kalus^e Sebastian Barbus^f Susana Gomis-Kleindienst^f Robert Sabat^{a, b}

^aInterdisciplinary Group of Molecular Immunopathology, Dermatology/Medical Immunology,
Charité – Universitätsmedizin Berlin, Berlin, Germany; ^bPsoriasis Research and Treatment Centre,
Charité – Universitätsmedizin Berlin, Berlin, Germany; ^cBerlin-Brandenburg Centre for Regenerative Therapies,
Charité – Universitätsmedizin Berlin, Berlin, Germany; ^dCentre for Dermatosurgery, Havelklinik, Berlin, Germany;
^eGKM Gesellschaft für Therapieforschung mbH, Munich, Germany; ^fAbbVie Deutschland GmbH & Co. KG,
Wiesbaden, Germany

The average duration from the onset of the first symptoms to the diagnosis was **10.0 ± 9.6** (mean \pm standard deviation) years.



ACNE INVERSA IS
FREQUENTLY
MISDIAGNOSED AS
“NORMAL” ABSCESS OR
FOLICULITIS

Kokolakis G, Wolk K, Schneider-Burrus S, et al. Delayed Diagnosis of Hidradenitis Suppurativa and Its Effect on Patients and Healthcare System. *Dermatology*. 2020;236(5):421-430.
doi:10.1159/000508787

Hidradenitis suppurativa / Acne inversa is a chronic, recurrent skin disease that usually occurs after puberty and has a tendency to scarring. It manifests with painful, deep-seated, inflammatory skin lesions that occur in skin regions rich in terminal follicles and apocrine glands, most commonly in the axillae as well as the inguinal and anogenital regions (Dessau Definition).

Hidradenitis suppurativa / Acne inversa is a chronic, recurrent skin disease that usually occurs after puberty and has a tendency to scarring. It manifests with painful, deep-seated, inflammatory skin lesions that occur in skin regions rich in terminal follicles and apocrine glands, most commonly in the axillae as well as the inguinal and anogenital regions (Dessau Definition).

TYPICAL LOCATIONS



Nguyen TV, Damiani G, Orenstein LAV, Hamzavi I, Jemec GB. Hidradenitis suppurativa: an update on epidemiology, phenotypes, diagnosis, pathogenesis, comorbidities and quality of life. *J Eur Acad Dermatol Venereol*. 2021 Jan;35(1):50-61. doi:10.1111/jdv.16677. Epub 2020 Jul 16. PMID: 32460374.

TYPICAL LOCATIONS

AGE OF ONSET: 23



TYPICAL LOCATIONS

AGE OF ONSET: 23

50% OBESE



TYPICAL LOCATIONS

AGE OF ONSET: 23

50% OBESE

90% SMOKERS



TYPICAL LOCATIONS

AGE OF ONSET: 23

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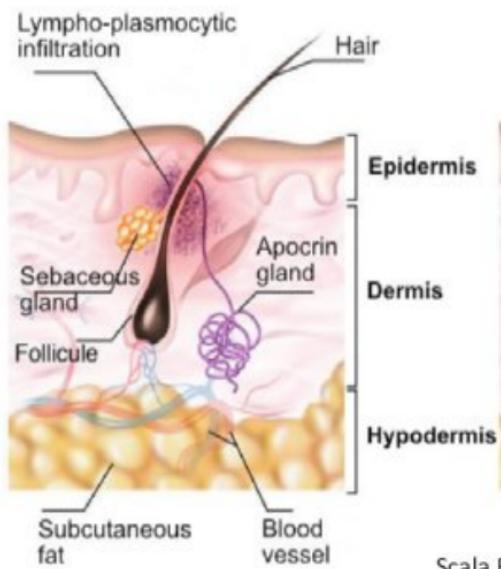
MEN:WOMEN RATIO 1:2 – 1:5



HAIR FOLLICLE INFLAMMATION



FOLLICULAR HYPERKERATOSIS

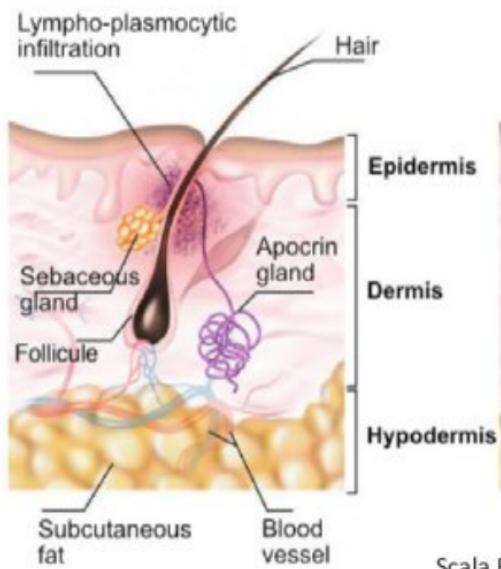


Scala E, Cacciapuoti S, Garzorz-Stark N, Megna M, Marasca C, Seiringer P, Volz T, Eyerich K, Fabbrocini G. Hidradenitis Suppurativa: Where We Are and Where We Are Going. *Cells*. 2021 Aug 15;10(8):2094. doi: 10.3390/cells10082094.
PMID: 34440863; PMCID: PMC8392140. BILD: Centre of evidence in Dermatology, Hidradenitis Suppurativa Guidelines

HAIR FOLLICLE INFLAMMATION



FOLLICULAR HYPERKERATOSIS



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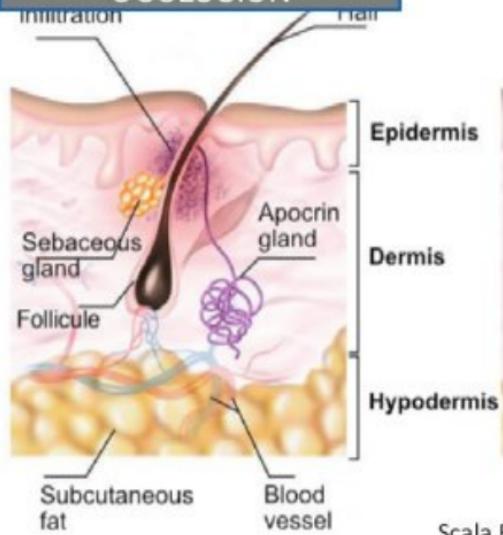
HAIR FOLLICLE
INFLAMMATION



FOLLICULAR
HYPERKERATOSIS



FOLLICULAR
OCCLUSION



Scala E, Cacciapuoti S, Garzorz-Stark N, Megna M, Marasca C, Seiringer P, Volz T, Eyerich K, Fabbrocini G. Hidradenitis Suppurativa: Where We Are and Where We Are Going. *Cells*. 2021 Aug 15;10(8):2094. doi: 10.3390/cells10082094.
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HAIR FOLLICLE
INFLAMMATION

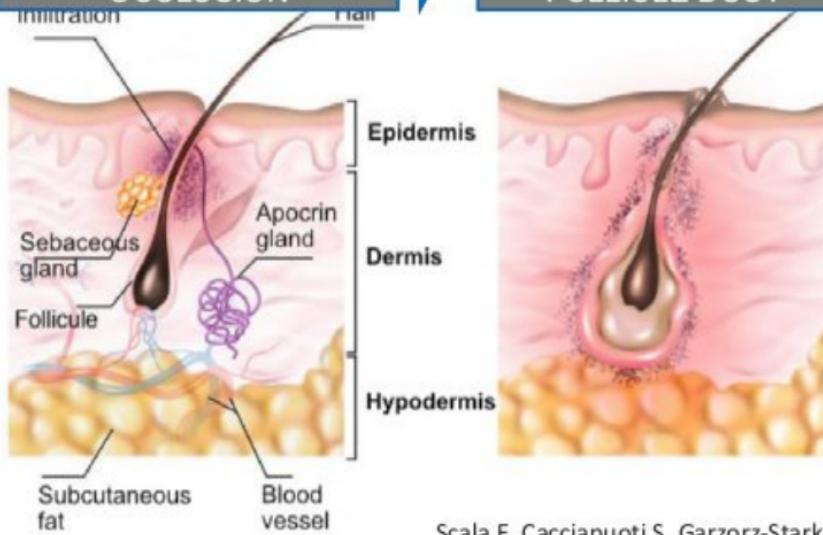


FOLLICULAR
HYPERKERATOSIS



FOLLICULAR
OCCLUSION

EXPANSION OF THE
FOLLICLE DUCT



Scala E, Cacciapuoti S, Garzorz-Stark N, Megna M, Marasca C, Seiringer P, Volz T, Eyerich K, Fabbrocini G. Hidradenitis Suppurativa: Where We Are and Where We Are Going. *Cells*. 2021 Aug 15;10(8):2094. doi: 10.3390/cells10082094. PMID: 34440863; PMCID: PMC8392140. BILD: Centre of evidence in Dermatology, Hidradenitis Suppurativa Guidelines

HAIR FOLLICLE
INFLAMMATION



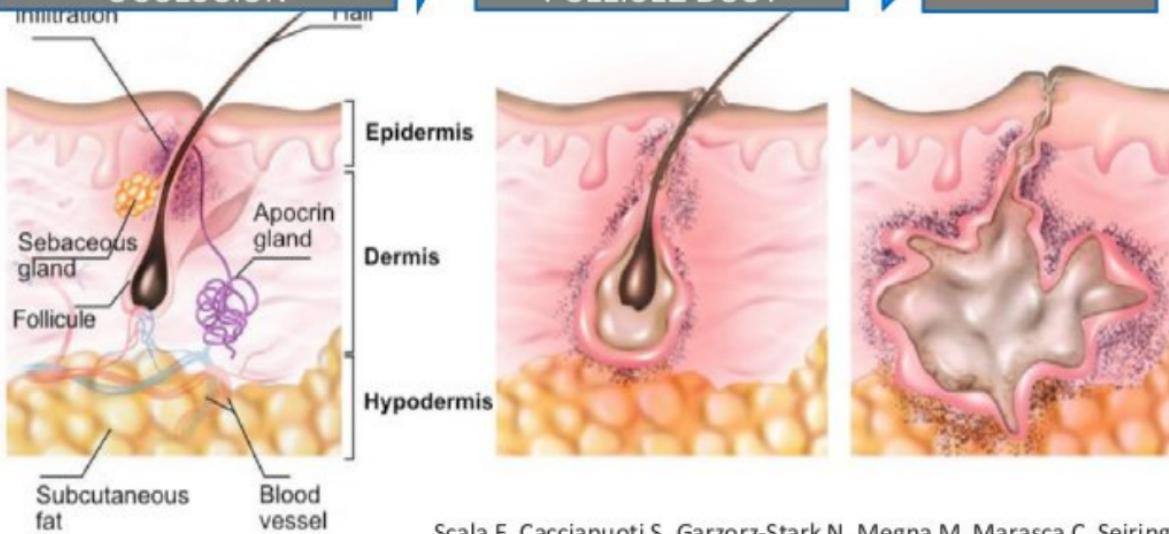
FOLLICULAR
HYPERKERATOSIS



FOLLICULAR
OCCLUSION

EXPANSION OF THE
FOLLICLE DUCT

RUPTURE



Scala E, Cacciapuoti S, Garzorz-Stark N, Megna M, Marasca C, Seiringer P, Volz T, Eyerich K, Fabbrocini G. Hidradenitis Suppurativa: Where We Are and Where We Are Going. *Cells*. 2021 Aug 15;10(8):2094. doi: 10.3390/cells10082094. PMID: 34440863; PMCID: PMC8392140. BILD: Centre of evidence in Dermatology, Hidradenitis Suppurativa Guidelines

HAIR FOLLICLE
INFLAMMATION



FOLLICULAR
HYPERKERATOSIS

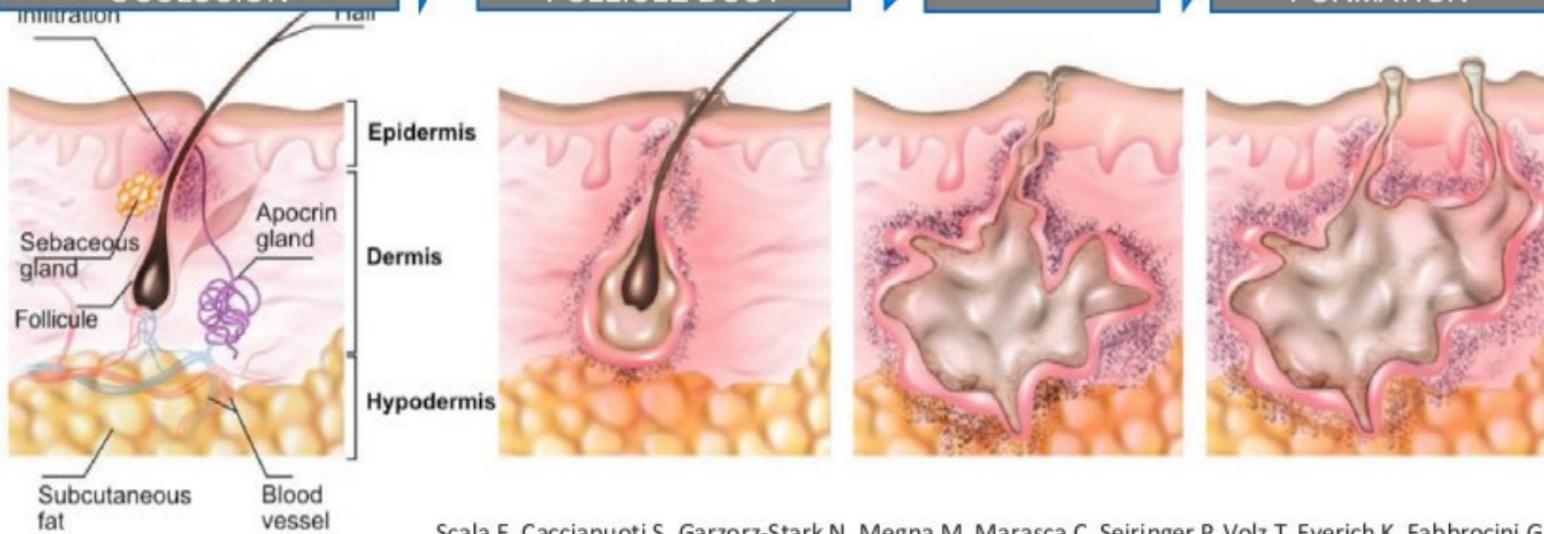


FOLLICULAR
OCCLUSION

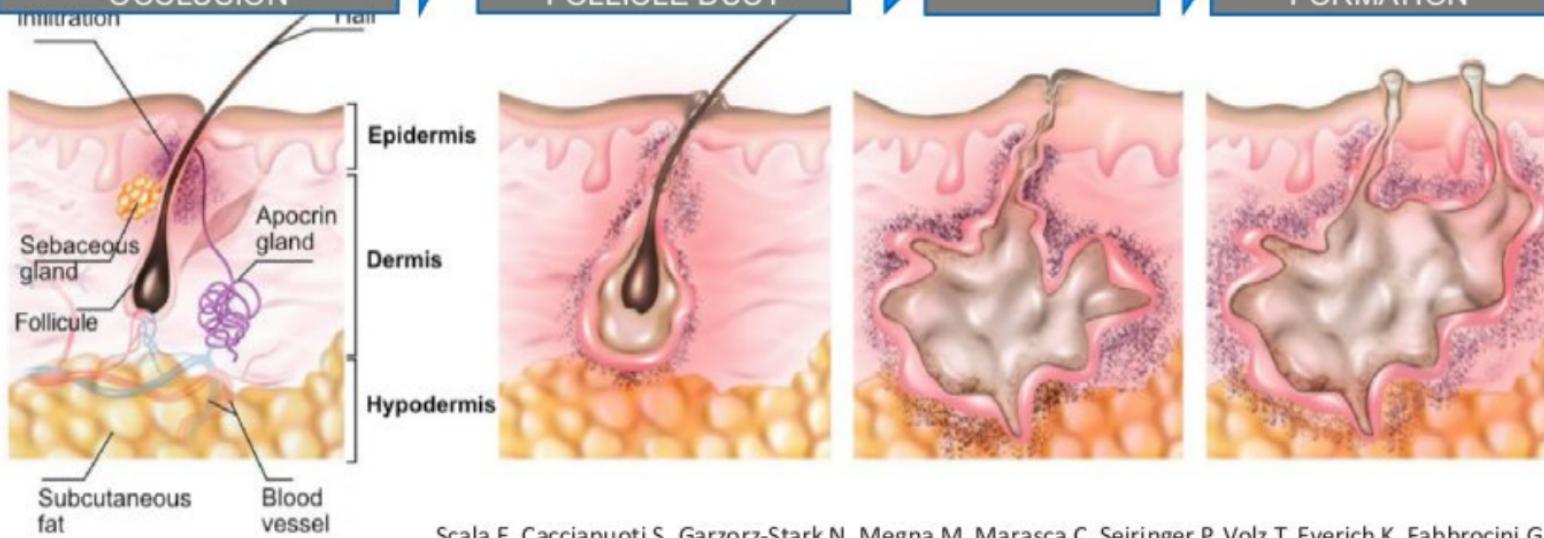
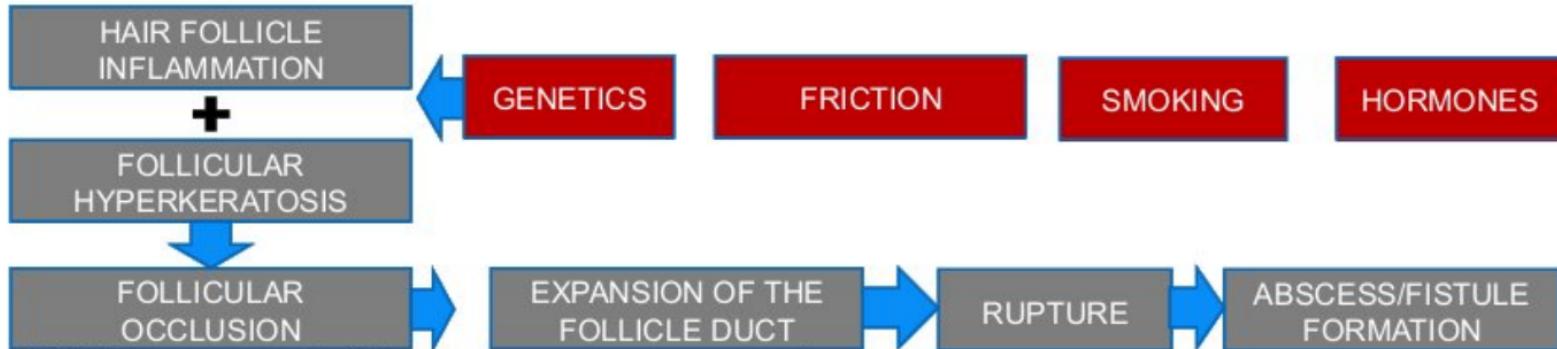
EXPANSION OF THE
FOLLICLE DUCT

RUPTURE

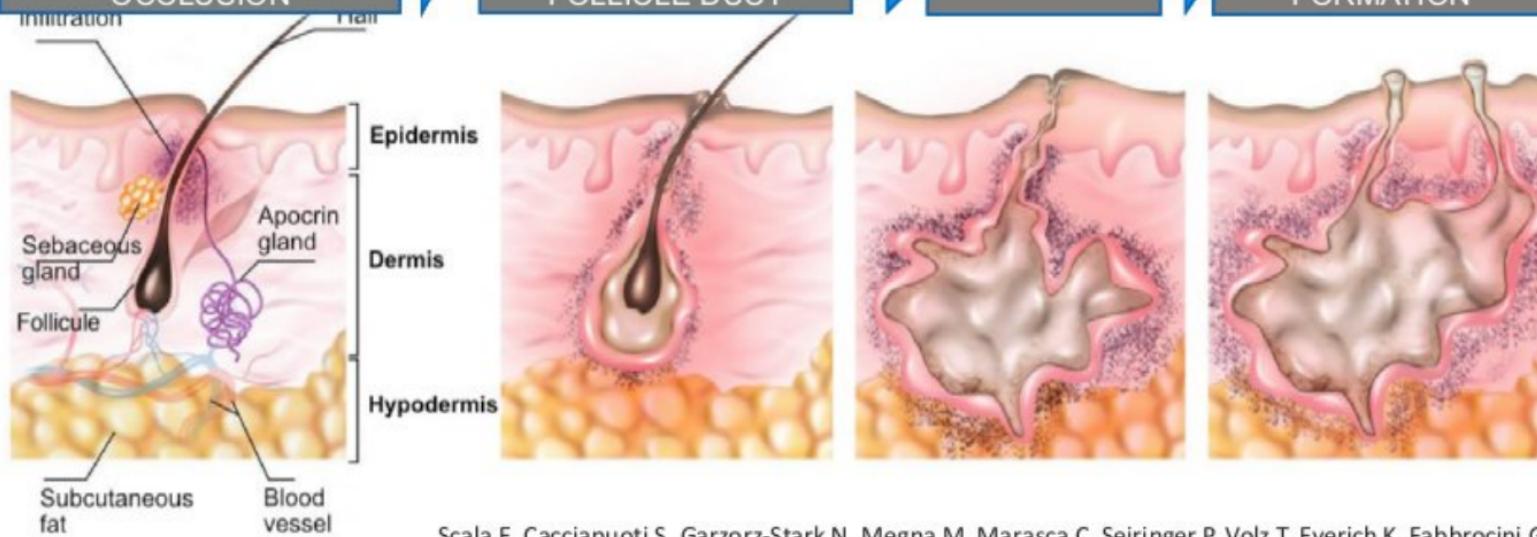
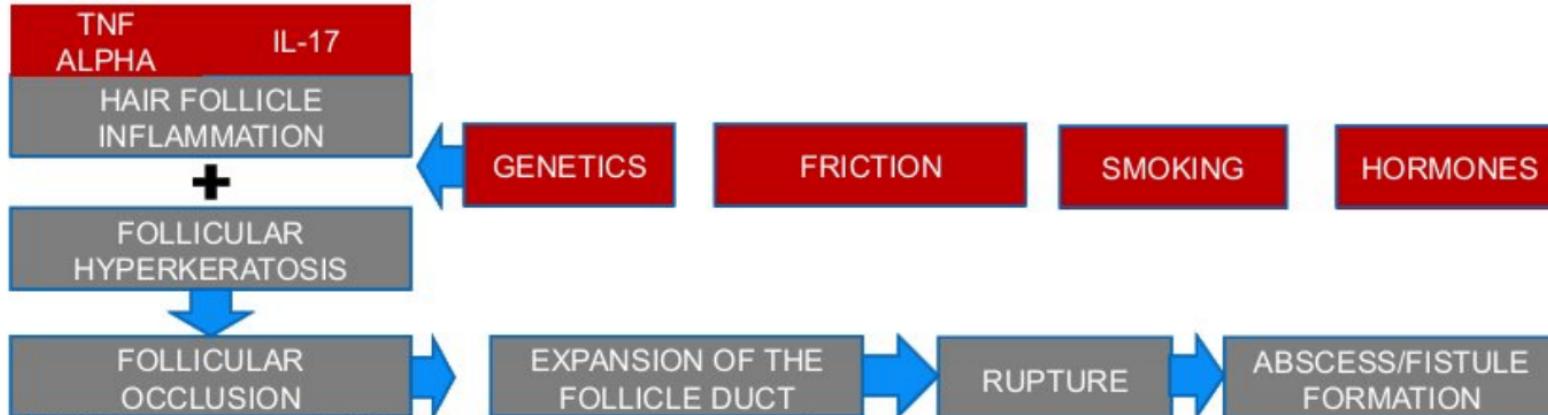
ABSCESS/FISTULE
FORMATION



Scala E, Cacciapuoti S, Garzorz-Stark N, Megna M, Marasca C, Seiringer P, Volz T, Eyerich K, Fabbrocini G. Hidradenitis Suppurativa: Where We Are and Where We Are Going. *Cells*. 2021 Aug 15;10(8):2094. doi: 10.3390/cells10082094. PMID: 34440863; PMCID: PMC8392140. BILD: Centre of evidence in Dermatology, Hidradenitis Suppurativa Guidelines



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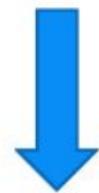


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INFLAMMATORY NODULES

HURLEY I

ABSCESSSES
MERGE



SCAR AND FISTULA
FORMATION

ABSCESSSES
MERGE



SCAR AND FISTULA
FORMATION

HURLEY II



Nike (II)
Anton Romako (Wien 1832 - 1889)



Nike (II)

Anton Romako (Wien 1832 - 1889)

EXTENSIVE INVOLVEMENT: ABSCESSSES, FISTULAS AND SCARS

EXTENSIVE INVOLVEMENT: ABSCESSSES, FISTULAS AND SCARS

HURLEY II

DIAGNOSIS:



X

X

X

X

Zouboulis CC, Desai N, Emtestam L, Hunger RE, Ioannides D, Juhász I, Lapins J, Matusiak L, Prens EP, Revuz J, Schneider-Burrus S, Szepietowski JC, van der Zee HH, Jemec GB. European S1 guideline for the treatment of hidradenitis suppurativa/acne inversa. J Eur Acad Dermatol Venereol. 2015 Apr;29(4):619-44. doi: 10.1111/jdv.12966. Epub 2015 Jan 30. PMID: 25640693.

DIAGNOSIS:

CLINICAL EXAMINATION

Zouboulis CC, Desai N, Emtestam L, Hunger RE, Ioannides D, Juhász I, Lapins J, Matusiak L, Prens EP, Revuz J, Schneider-Burrus S, Szepietowski JC, van der Zee HH, Jemec GB. European S1 guideline for the treatment of hidradenitis suppurativa/acne inversa. J Eur Acad Dermatol Venereol. 2015 Apr;29(4):619-44. doi: 10.1111/jdv.12966. Epub 2015 Jan 30. PMID: 25640693.

COMORBIDITY

50 % METABOLIC SYNDROME

4-12.5 % PCOS

10-25 % DIABETES TYPE 2

MENTAL DISORDERS

SPONDYLARTHRITIS

IBD



COMORBIDITY

50 % METABOLIC SYNDROME

4-12.5 % PCOS

10-25 % DIABETES TYPE 2



MENTAL DISORDERS

SPONDYLARTHRITIS

IBD

IBD

CHRONIC

ACNE INVERSA

INFLAMMATORY

SIMILAR TARGET
THERAPIES

Garg A, Hundal J, Strunk A. Overall and subgroup prevalence of Crohn disease among patients with hidradenitis suppurativa: a population-based analysis in the United States. *JAMA Dermatol.* 2018;154(7):814–818

IBD

CHRONIC

ACNE INVERSA

INFLAMMATORY

SIMILAR TARGET
THERAPIES

SUPPURATION

SINUS TRACTS

Garg A, Hundal J, Strunk A. Overall and subgroup prevalence of Crohn disease among patients with hidradenitis suppurativa: a population-based analysis in the United States. *JAMA Dermatol.* 2018;154(7):814–818

ACNE INVERSA
the adjusted odds of having

CD

1.2 – 2.0 times

compared to control individuals

UC

1.3 – 1.8 times

compared to control individuals



I HATE IT

PAIN

PRURITUS

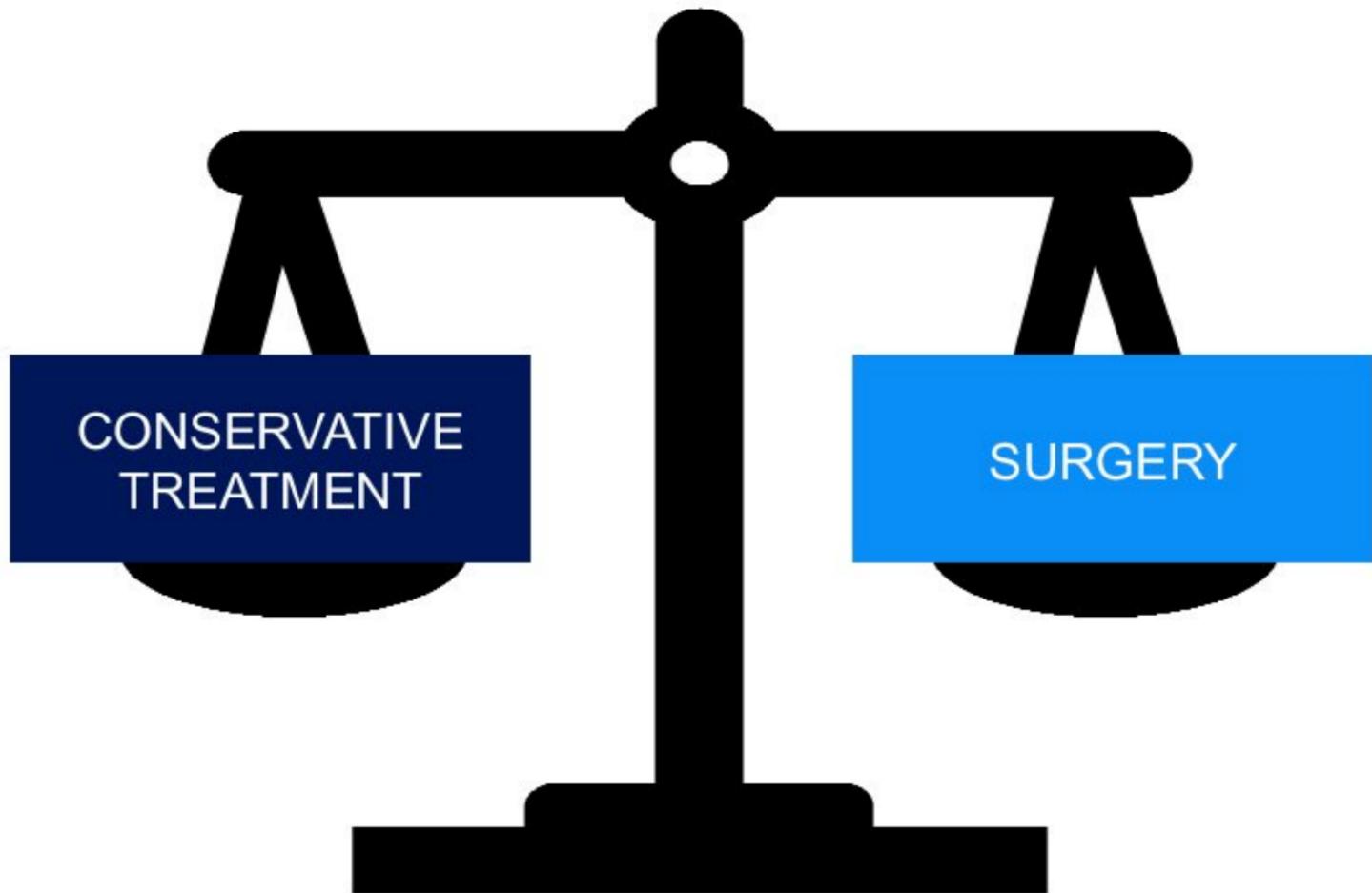
SMELL

SUPPURATION



I HATE IT

ME TOO



INFLAMMATION

INFLAMMATION



ANTISPETIC SOAPS



1% CLINDAMYCIN TWICE DAILY

Alikhan A, Sayed C, Alavi A, Alhusayen R, Brassard A, Burkhart C, Crowell K, Eisen DB, Gottlieb AB, Hamzavi I, Hazen PG, Jaleel T, Kimball AB, Kirby J, Lowes MA, Micheletti R, Miller A, Naik HB, Orgill D, Poulin Y. North American clinical management guidelines for hidradenitis suppurativa: A publication from the United States and Canadian Hidradenitis Suppurativa Foundations: Part II: Topical, intralesional, and systemic medical management. *J Am Acad Dermatol.* 2019 Jul;81(1):91-101. doi: 10.1016/j.jaad.2019.02.068. Epub 2019 Mar 11. PMID: 30872149; PMCID: PMC9131892.

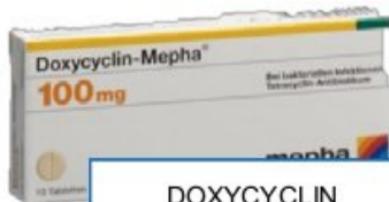
Patterns of antimicrobial resistance in lesions of hidradenitis suppurativa



Alexander H. Fischer, MPH,^a Alessandra Haskin, BA,^b and Ginette A. Okoye, MD^a
Baltimore, Maryland, and Washington, District of Columbia

Patients using topical clindamycin were more likely to grow clindamycin-resistant *Staphylococcus aureus* compared with patients using no antibiotics (63% vs 17%; $P = .03$).

INFLAMMATION



DOXYCYCLIN
100mg BID, 12W

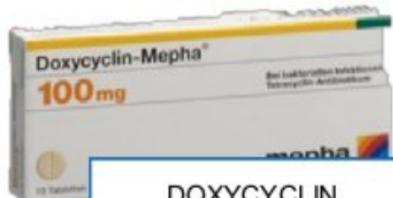
ANTISEPTISCHE
HAUTWASCHEMULSION



1% CLINDAMYCIN
BID

Alikhan A, Sayed C, Alavi A, Alhusayen R, Brassard A, Burkhardt C, Crowell K, Eisen DB, Gottlieb AB, Hamzavi I, Hazen PG, Jaleel T, Kimball AB, Kirby J, Lowes MA, Micheletti R, Miller A, Naik HB, Orgill D, Poulin Y. North American clinical management guidelines for hidradenitis suppurativa: A publication from the United States and Canadian Hidradenitis Suppurativa Foundations: Part II: Topical, intralesional, and systemic medical management. *J Am Acad Dermatol.* 2019 Jul;81(1):91-101. doi: 10.1016/j.jaad.2019.02.068. Epub 2019 Mar 11. PMID: 30872149; PMCID: PMC9131892.

INFLAMMATION



ANTISEPTISCHE
HAUTWASCHEMULSION



CLINDAMYCIN (+RIFAMPICIN)
300mg bid, 8-12 W

INTRALESIONAL
STEROIDS

1% CLINDAMYCIN
BID





Research letter

Clostridium difficile infection risk in patients with hidradenitis suppurativa

Anuj Pranav Sanghvi, J. Alex Miles, Christopher Sayed 

First published: 14 June 2022 | <https://doi.org/10.1111/bjd.21709> | Citations: 1

***Clostridium difficile* arising in a patient with hidradenitis suppurativa on clindamycin and rifampin**

Elicia Bessaleli¹ BA, Noah Scheinfeld² MD JD

Affiliations: ¹Stern College for Women, Yeshiva University, New York, New York, USA, ²Department of Dermatology, Weil Cornell Medical College, New York, New York, USA

Corresponding Author: Noah Scheinfeld MD, JD, 150 West 55th Street, New York, NY 10019, Tel: 212-991-6490, Fax: 646-695-1011, Email: Scheinfeld@earthlink.net



Die Trinkerin
Henri de Toulouse-Lautrec (1888)



Die Trinkerin
Henri de Toulouse-Lautrec (1888)

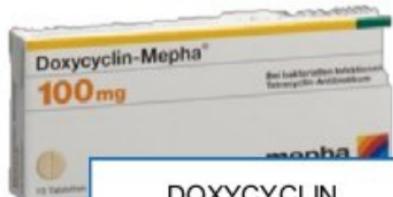
ORIGINAL ARTICLE

Two Phase 3 Trials of Adalimumab for Hidradenitis Suppurativa

Alexa B. Kimball, M.D., M.P.H., Martin M. Okun, M.D., Ph.D.,
David A. Williams, M.D., M.P.H., Alice B. Gottlieb, M.D., Ph.D.,
Kim A. Papp, M.D., Ph.D., Christos C. Zouboulis, M.D., Ph.D.,
April W. Armstrong, M.D., Francisco Kerdel, M.D., Michael H. Gold, M.D.,
Seth B. Forman, M.D., Neil J. Korman, M.D., Ph.D.,
Evangelos J. Giamarellos-Bourboulis, M.D., Ph.D., Jeffrey J. Crowley, M.D.,
Charles Lynde, M.D., Ziad Reguiai, M.D., Errol-Prospero Prens, M.D., Ph.D.,
Ehab Alwawi, B.S., Nael M. Mostafa, Ph.D., Brett Pinsky, Ph.D.,
Murali Sundaram, Ph.D., Yihua Gu, M.S., Dawn M. Carlson, M.D., M.P.H.,
and Gregor B.E. Jemec, M.D., D.M.Sc.

Organization	Year	Publication	In-text abbreviation
European Academy of Dermatology and Venereology	2015	European S1 guideline for the treatment of hidradenitis suppurativa/acne inversa [25]	European S1
European HS Foundation	2016	Evidence-based approach to the treatment of hidradenitis suppurativa/acne inversa, based on the European guidelines for hidradenitis suppurativa [24]	European HS Foundation
Swiss consensus group	2017	Swiss practice recommendations for the management of hidradenitis suppurativa/acne inversa [26]	Swiss
Canadian Dermatology Association consensus group	2017	Approach to the management of patients with hidradenitis suppurativa: a consensus document [23]	Canadian consensus
British Association of Dermatologists	2018	British Association of Dermatologists guidelines for the management of hidradenitis suppurativa (acne inversa) 2018 [18]	British
Canadian Dermatology Association	2018	Hidradenitis suppurativa: A novel model of care and an integrative strategy to adopt an orphan disease [22]	Canadian Dermatology Association
HS ALLIANCE	2019	Hidradenitis suppurativa/acne inversa: a practical framework for treatment optimization - systematic review and recommendations from the HS ALLIANCE working group [21]	HS ALLIANCE
US and Canadian HS Foundations	2019	North American clinical management guidelines for hidradenitis suppurativa: a publication from the United States and Canadian hidradenitis suppurativa foundations Part I: diagnosis, evaluation, and the use of complementary and procedural management [19] Part II: topical, intralesional, and systemic medical management [20]	North American
Brazilian Society of Dermatology	2019	Consensus on the treatment of hidradenitis suppurativa – Brazilian Society of Dermatology [27]	Brazilian

INFLAMMATION



ANTISEPTISCHE
HAUTWASCHEMULSION



DOXYCYCLIN
100mg BID, 12W

CLINDAMYCIN (+RIFAMPICIN)
300mg bid, 8-12 W

1% CLINDAMYCIN
BID

INTRALESIONAL
STEROIDS



ADALIMUMAB
40 mg once weekly

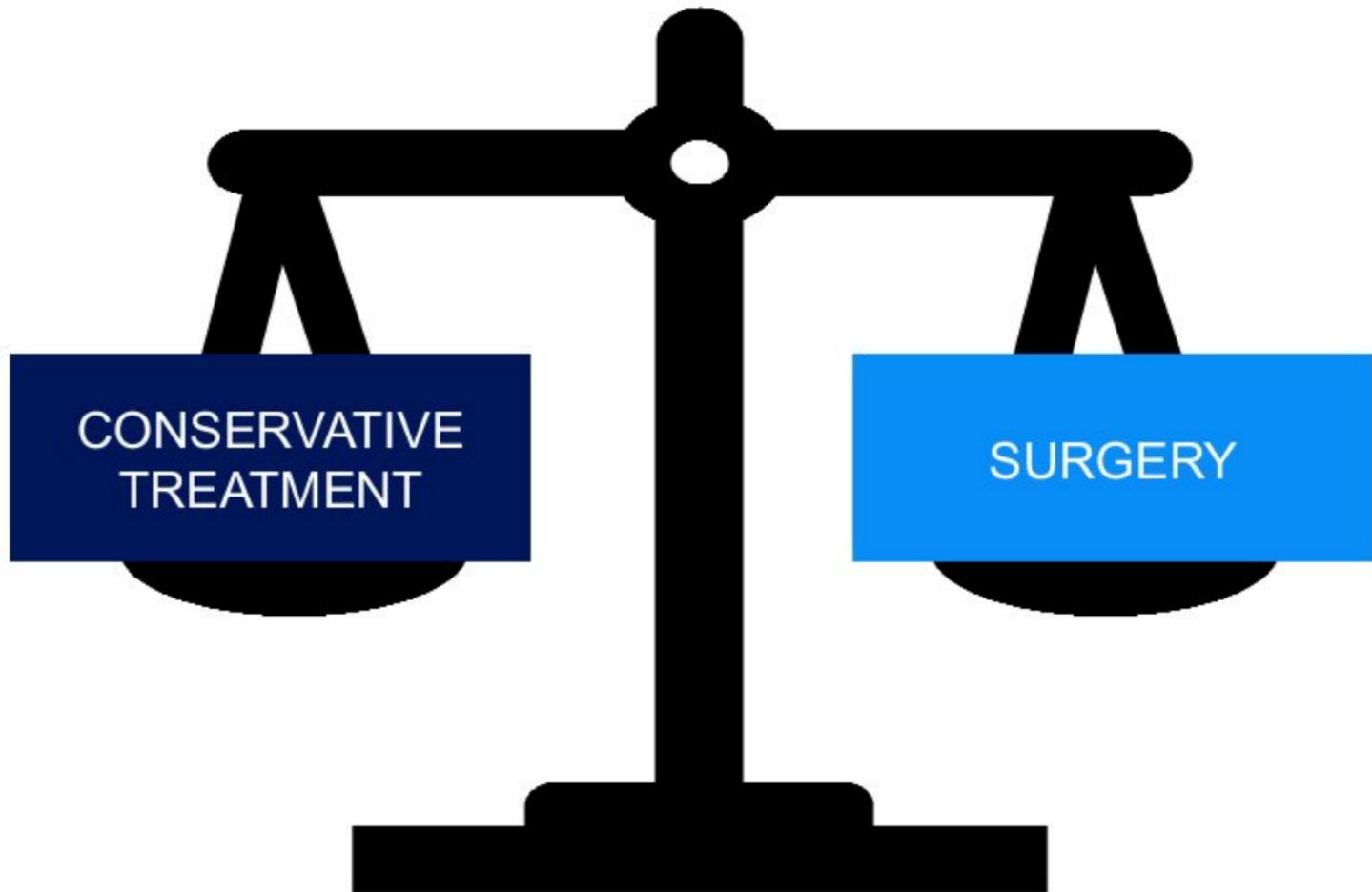
DAY 0

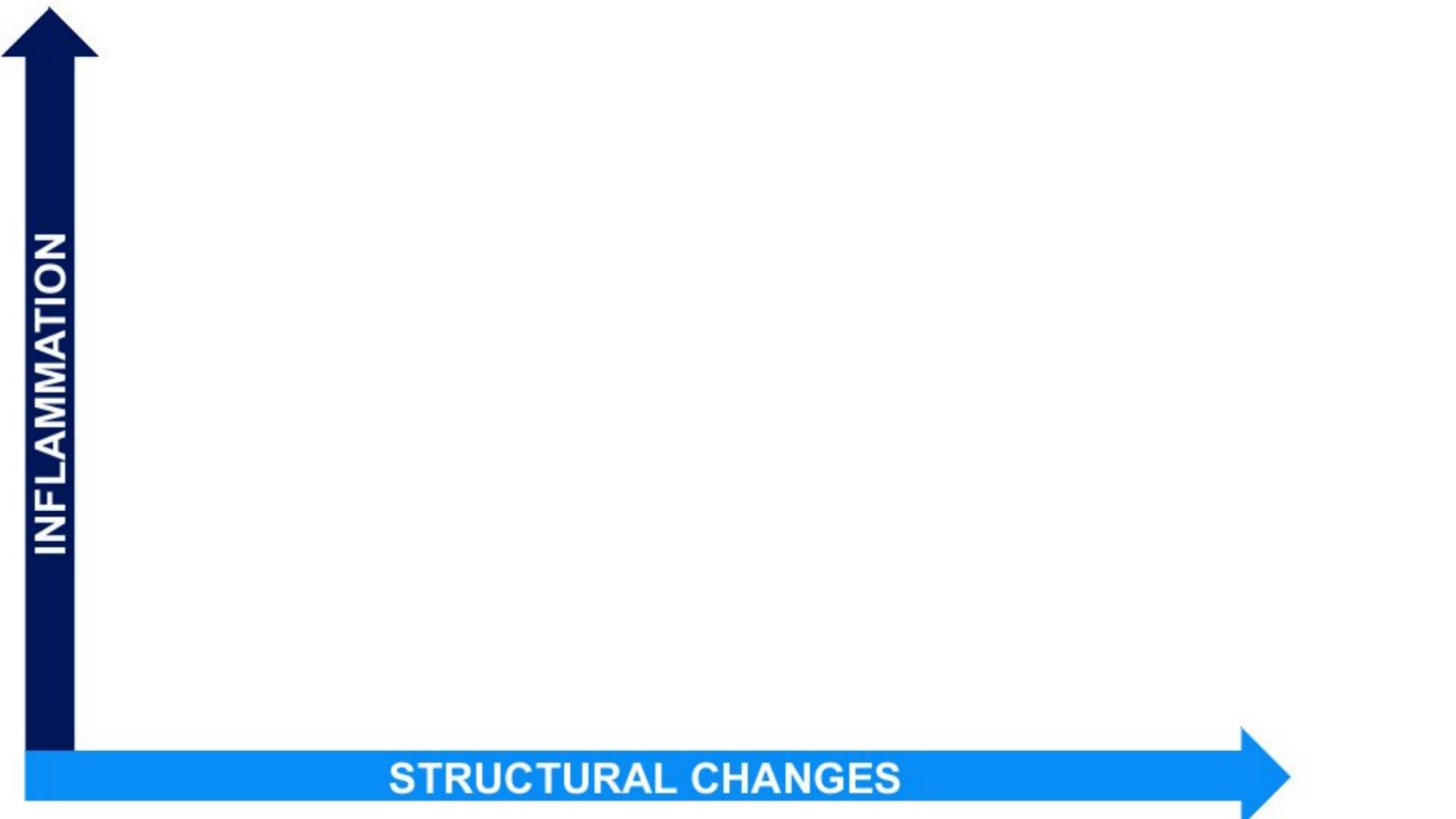
DAY 28

ADALIMUMAB
40 mg once weekly

DAY 0

DAY 28





INFLAMMATION

STRUCTURAL CHANGES

INFLAMMATION

STRUCTURAL CHANGES

WIDE EXCISION

ABSCESS DRAINAGE

ABSCESS DRAINAGE

78 -100 %

DEROOFING

DAY 0

DAY 40

DEROOFING



DAY 0

DAY 30

Secukinumab in moderate-to-severe hidradenitis suppurativa (SUNSHINE and SUNRISE): week 16 and week 52 results of two identical, multicentre, randomised, placebo- controlled, double-blind phase 3 trials

Alexa B Kimball, Gregor B E Jemec, Afsaneh Alavi, Ziad Regulai, Alice B Gottlieb, Falk G Bechara, Carle Paul, Evangelos J Giannarellis Bourboulis,
Axel P Villani, Andreas Schwinn, Franziska Rueff, Larisha Pillay Ramaya, Adam Reich, Ines Lobo, Rodney Sinclair, Thierry Passeron,
Antonio Martorell, Pedro Mendes-Bastos, Georgios Kokolakis, Pierre-Andre Becherel, Magdalena B Wozniak, Angela Llobet Martinez, Xiaoling Wei,
Lorenz Uhlmann, Anna Passera, Deborah Keefe, Ruvie Martin, Clarice Field, Li Chen, Marc Vandemeulebroecke, Shoba Ravichandran,
Elisa Muscianisi

Secukinumab in moderate-to-severe hidradenitis suppurativa (SUNSHINE and SUNRISE): week 16 and week 52 results of two identical, multicentre, randomised, placebo-controlled, double-blind phase 3 trials

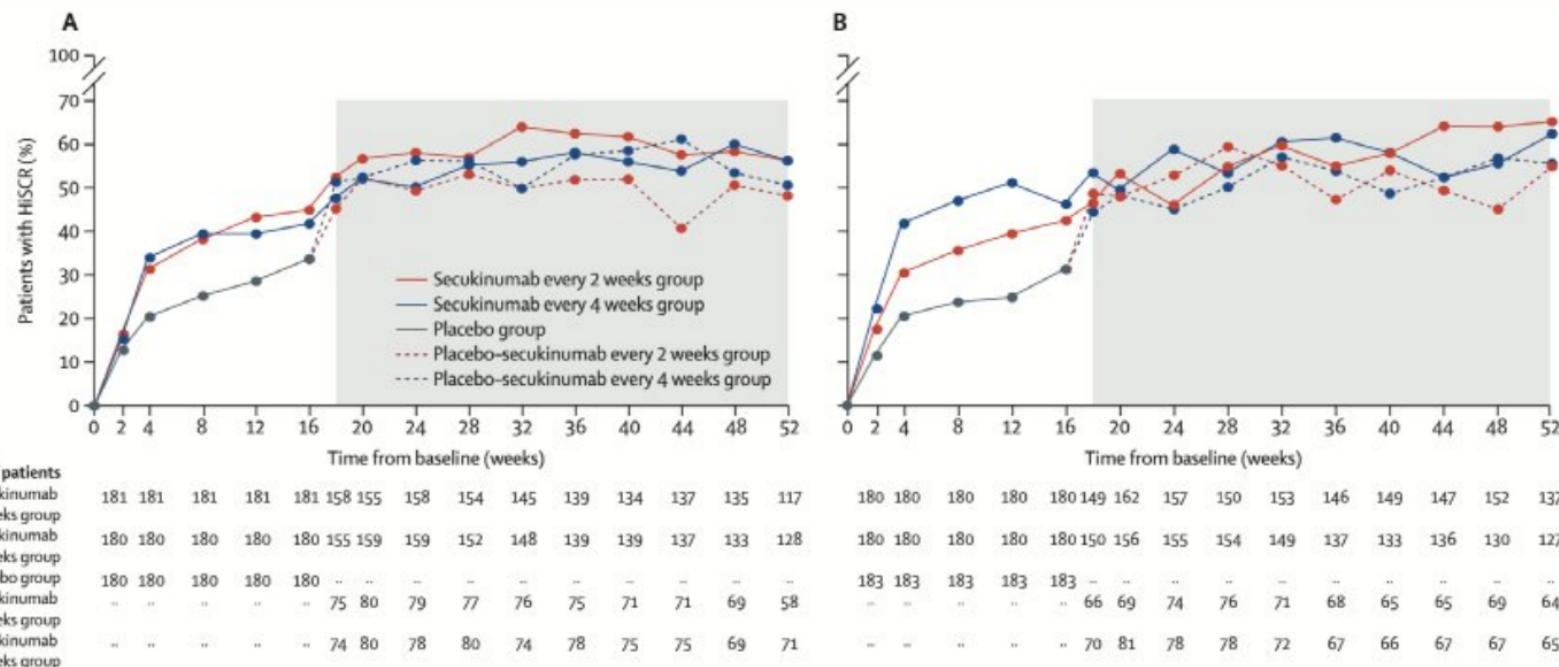
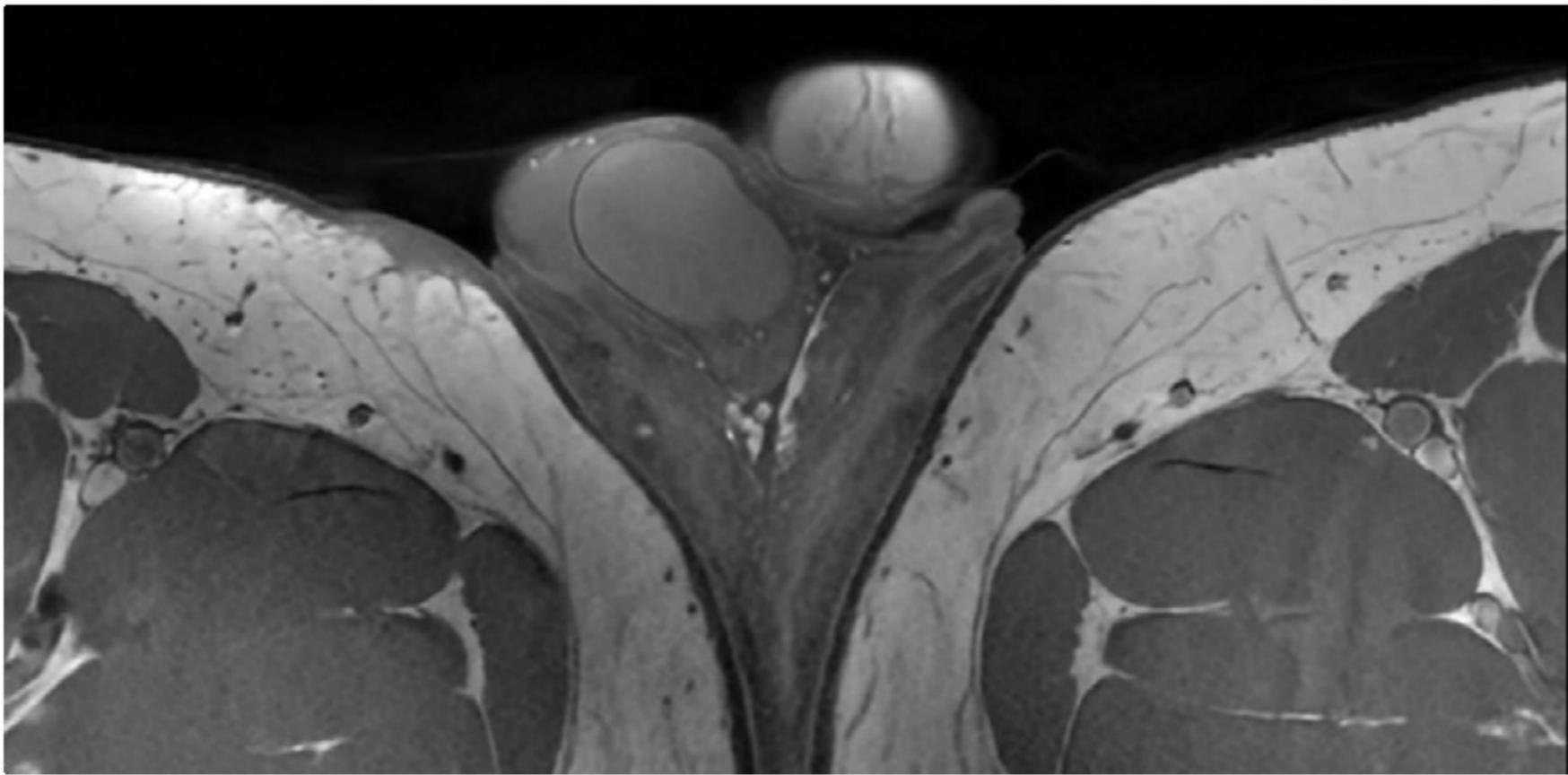


Figure 2: The effects of secukinumab and placebo on HiSCR



FUTURE CHALLENGES





Stadtspital Zürich Europaallee

Ambulantes Zentrum

THANK YOU FOR YOUR ATTENTION
robertartur.dahmen@stadtspital.ch