

# Package: hidradenitis (via r-universe)

November 3, 2024

**Title** Calculate Clinical Scores for Hidradenitis Suppurativa (HS), a Dermatologic Disease

**Version** 1.0.1

**Description** Calculate clinical scores for hidradenitis suppurativa (HS), a dermatologic disease. The scores are typically used for evaluation of efficacy in clinical trials. The scores are not commonly used in clinical practice. The specific scores implemented are Hidradenitis Suppurativa Clinical Response (HiSCR) (Kimball, et al. (2015) <[doi:10.1111/jdv.13216](https://doi.org/10.1111/jdv.13216)>), Hidradenitis Suppurativa Area and Severity Index Revised (HASI-R) (Goldfarb, et al. (2020) <[doi:10.1111/bjd.19565](https://doi.org/10.1111/bjd.19565)>), hidradenitis suppurativa Physician Global Assessment (HS PGA) (Marzano, et al. (2020) <[doi:10.1111/jdv.16328](https://doi.org/10.1111/jdv.16328)>), and the International Hidradenitis Suppurativa Severity Score System (IHS4) (Zouboulis, et al. (2017) <[doi:10.1111/bjd.15748](https://doi.org/10.1111/bjd.15748)>).

**License** GPL (>= 3)

**Encoding** UTF-8

**Roxygen** list(markdown = TRUE)

**RoxygenNote** 7.3.1

**Suggests** spelling, testthat (>= 3.0.0)

**Config/testthat/edition** 3

**URL** <https://humanpred.github.io/hidradenitis/>

**BugReports** <https://github.com/humanpred/hidradenitis/issues>

**Language** en-US

**Imports** checkmate

**Repository** <https://humanpred.r-universe.dev>

**RemoteUrl** <https://github.com/humanpred/hidradenitis>

**RemoteRef** HEAD

**RemoteSha** 2a5c9d3a8d516fd1ac51e11ab3184a06f22b921e

## Contents

hasi_bsa_to_ordinal . . . . .	2
hasi_r_num . . . . .	3
hiscr . . . . .	4
hs_pga_char . . . . .	5
hs_pga_num . . . . .	6
ihs4_char . . . . .	7
ihs4_num . . . . .	8
<b>Index</b>	<b>9</b>

---

hasi\_bsa\_to\_ordinal     *Converts BSA percentage to the ordinal scale for HASI-R scoring.*

---

### Description

Converts BSA percentage to the ordinal scale for HASI-R scoring.

### Usage

```
hasi_bsa_to_ordinal(
  bsa_percent_within_site = NULL,
  bsa_percent_total_body = NULL,
  bsa_ordinal = NULL,
  bodysite = NULL
)
```

### Arguments

bsa\_percent\_within\_site     Numeric vector representing BSA percentages (0-100)

bsa\_percent\_total\_body     Numeric vector representing BSA percentages (0-15, depending on site)

bsa\_ordinal     Numeric vector representing BSA values. (0-6)

bodysite     Optional character vector representing body sites

### Value

Integer vector representing the ordinal scale values

### References

Goldfarb N, Lowes MA, Butt M, King T, Alavi A, Kirby JS. Hidradenitis Suppurativa Area and Severity Index Revised (HASI-R): psychometric property assessment. Br J Dermatol. 2021 May;184(5):905-912. doi: 10.1111/bjd.19565. Epub 2020 Dec 30. PMID: 32969027; PMCID: PMC8573730.

**See Also**

Other HASI: [hasi\\_r\\_num\(\)](#)

**Examples**

```
hasi_bsa_to_ordinal(c(0, 2, 5, 12, 25, 40, 75))
```

---

hasi_r_num	<i>Calculates the HASI-R score for each patient and visit.</i>
------------	--

---

**Description**

Calculates the HASI-R score for each patient and visit.

**Usage**

```
hasi_r_num(
  bsa_percent_within_site = NULL,
  bsa_percent_total_body = NULL,
  bsa_ordinal = NULL,
  bodysite = NULL,
  inflam_color_chg,
  induration,
  open_skin_surface,
  tunnels
)
```

**Arguments**

<code>bsa_percent_within_site</code>	Numeric vector representing BSA percentages (0-100)
<code>bsa_percent_total_body</code>	Numeric vector representing BSA percentages (0-15, depending on site)
<code>bsa_ordinal</code>	Numeric vector representing BSA values. (0-6)
<code>bodysite</code>	Optional character vector representing body sites
<code>inflam_color_chg</code>	Integer vector representing inflammatory color change scores (0-3).
<code>induration</code>	Integer vector representing induration scores (0-3).
<code>open_skin_surface</code>	Integer vector representing open skin surface scores (0-3).
<code>tunnels</code>	Integer vector representing tunnels scores (0-3).

**Value**

A numeric vector of the calculated HASI-R score

## References

Goldfarb N, Lowes MA, Butt M, King T, Alavi A, Kirby JS. Hidradenitis Suppurativa Area and Severity Index Revised (HASI-R): psychometric property assessment. *Br J Dermatol.* 2021 May;184(5):905-912. doi: 10.1111/bjd.19565. Epub 2020 Dec 30. PMID: 32969027; PMCID: PMC8573730.

## See Also

Other HASI: [hasi\\_bsa\\_to\\_ordinal\(\)](#)

## Examples

```
hasi_r_num(
  bsa_percent_within_site = c(0, 0, 0, 0, 5, 1, 4.3, 1.2, 6.8, 7.2),
  bodysite =
    c("Right Axilla", "Buttocks including Intergluteal Cleft",
      "Back", "Left Thigh", "Head & Neck", "Left Axilla",
      "Chest", "Pubis & Genitals", "Abdomen", "Right Thigh"),
  inflam_color_chg = c(0, 0, 0, 0, 2, 3, 1, 3, 2, 0),
  induration = c(0, 0, 0, 0, 2, 3, 1, 3, 2, 0),
  open_skin_surface = c(0, 0, 0, 0, 2, 3, 1, 3, 2, 0),
  tunnels = c(0, 0, 0, 0, 2, 3, 1, 3, 2, 0)
)
```

---

hiscr

*Calculates HiSCR scores given a percentage parameter.*

---

## Description

Calculates HiSCR scores given a percentage parameter.

## Usage

```
hiscr(
  baseline_abscess,
  baseline_nodule,
  baseline_fistula,
  timepoint_abscess,
  timepoint_nodule,
  timepoint_fistula,
  percentage
)
```

## Arguments

baseline\_abscess

Integer vector representing the abscess count at baseline.

baseline\_nodule

Integer vector representing the inflammatory nodule count at baseline.

baseline_fistula	Integer vector representing the draining fistula count at baseline.
timepoint_abscess	Integer vector representing the abscess count at the time point of interest.
timepoint_nodule	Integer vector representing the inflammatory nodule count at the time point of interest.
timepoint_fistula	Integer vector representing the draining fistula count at the time point of interest.
percentage	Numeric value specifying the percentage required for HiSCR (e.g., 50 for HiSCR50, 75 for HiSCR75, etc.).

**Value**

A logical vector indicating whether the HiSCR response is achieved for each set of input parameters.

**References**

Kimball, A B et al. “HiSCR (Hidradenitis Suppurativa Clinical Response): a novel clinical endpoint to evaluate therapeutic outcomes in patients with hidradenitis suppurativa from the placebo-controlled portion of a phase 2 adalimumab study.” *Journal of the European Academy of Dermatology and Venereology* : JEADV vol. 30,6 (2016): 989-94. doi:10.1111/jdv.13216

**Examples**

```
hisscr(
  baseline_abscess = c(3, 2, 4),
  baseline_nodule = c(5, 4, 6),
  baseline_fistula = c(2, 1, 3),
  timepoint_abscess = c(1, 1, 2),
  timepoint_nodule = c(2, 3, 2),
  timepoint_fistula = c(2, 1, 3),
  percentage = 50
)
```

---

hs\_pga\_char

*Converts HS-PGA numerical scores to character values.*


---

**Description**

Converts HS-PGA numerical scores to character values.

**Usage**

```
hs_pga_char(hs_pga_scores)
```

**Arguments**

hs\_pga\_scores Integer vector representing the HS-PGA scores (1: Clean, 2: Minimal, 3: Mild, 4: Moderate, 5: Severe, 6: Very Severe).

**Value**

A character vector representing the corresponding HS-PGA categories.

**References**

Marzano, A V et al. "Creation of a severity index for hidradenitis suppurativa that includes a validated quality-of-life measure: the HIDRAScore." Journal of the European Academy of Dermatology and Venereology : JEADV vol. 34,8 (2020): 1815-1821. doi:10.1111/jdv.16328

**See Also**

Other HS-PGA: [hs\\_pga\\_num\(\)](#)

**Examples**

```
hs_pga_char(c(1, 2, 3, 4, 5, 6))
```

---

hs_pga_num	<i>Calculates HS-PGA scores based on abscess, draining fistula, and inflammatory nodule counts.</i>
------------	---

---

**Description**

Calculates HS-PGA scores based on abscess, draining fistula, and inflammatory nodule counts.

**Usage**

```
hs_pga_num(abscess_fistula, inflammatory_nodule, non_inflammatory_nodule)
```

**Arguments**

abscess\_fistula  
Integer vector representing the sum of abscess and draining fistula counts.

inflammatory\_nodule  
Integer vector representing the inflammatory nodule count.

non\_inflammatory\_nodule  
Integer vector representing the non-inflammatory nodule count.

**Value**

An integer vector representing the HS-PGA scores (1: Clean, 2: Minimal, 3: Mild, 4: Moderate, 5: Severe, 6: Very Severe)

## References

Marzano, A V et al. "Creation of a severity index for hidradenitis suppurativa that includes a validated quality-of-life measure: the HIDRAscore." Journal of the European Academy of Dermatology and Venereology : JEADV vol. 34,8 (2020): 1815-1821. doi:10.1111/jdv.16328

## See Also

Other HS-PGA: [hs\\_pga\\_char\(\)](#)

## Examples

```
hs_pga_num(  
  abscess_fistula = c(0, 0, 1, 0, 1, 2, 6),  
  inflammatory_nodule = c(0, 0, 0, 3, 5, 8, 12),  
  non_inflammatory_nodule = c(0, 1, 0, 0, 0, 0, 0)  
)
```

---

ihs4\_char

*Converts IHS4 numerical scores to character values.*

---

## Description

Converts IHS4 numerical scores to character values.

## Usage

```
ihs4_char(ihs4_scores)
```

## Arguments

`ihs4_scores` Integer vector representing the IHS4 scores (0-3: Mild, 4-10: Moderate, >=11: Severe).

## Value

A character vector representing the corresponding IHS4 categories

## References

Zouboulis, C C et al. "Development and validation of the International Hidradenitis Suppurativa Severity Score System (IHS4), a novel dynamic scoring system to assess HS severity." The British journal of dermatology vol. 177,5 (2017): 1401-1409. doi:10.1111/bjd.15748

## See Also

Other IHS4: [ihs4\\_num\(\)](#)

## Examples

```
ihs4_char(c(2, 5, 12))
```

---

ihs4_num	<i>Calculates IHS4 scores based on abscess, draining fistula, and inflammatory nodule counts.</i>
----------	---

---

### Description

Calculates IHS4 scores based on abscess, draining fistula, and inflammatory nodule counts.

### Usage

```
ihs4_num(nodules, abscesses, draining_tunnels)
```

### Arguments

nodules	Integer vector representing the nodule count
abscesses	Integer vector representing the abscess count
draining_tunnels	Integer vector representing the draining tunnel count

### Value

An integer vector representing the IHS4 scores (0-3: Mild, 4-10: Moderate, 11- : Severe).

### References

Zouboulis, C C et al. "Development and validation of the International Hidradenitis Suppurativa Severity Score System (IHS4), a novel dynamic scoring system to assess HS severity." *The British journal of dermatology* vol. 177,5 (2017): 1401-1409. doi:10.1111/bjd.15748

### See Also

Other IHS4: [ihs4\\_char\(\)](#)

### Examples

```
ihs4_num(  
  nodules = c(5, 3, 2),  
  abscesses = c(2, 1, 0),  
  draining_tunnels = c(1, 2, 3)  
)
```



# Index

## \* HASI

hasi\_bsa\_to\_ordinal, 2

hasi\_r\_num, 3

## \* HS-PGA

hs\_pga\_char, 5

hs\_pga\_num, 6

## \* IHS4

ihs4\_char, 7

ihs4\_num, 8

hasi\_bsa\_to\_ordinal, 2, 4

hasi\_r\_num, 3, 3

hiscr, 4

hs\_pga\_char, 5, 7

hs\_pga\_num, 6, 6

ihs4\_char, 7, 8

ihs4\_num, 7, 8