

# Package ‘MSMB’

April 2, 2026

**Title** Data sets for the book 'Modern Statistics for Biology'

**Version** 1.28.0

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**Description** Data sets for the book 'Modern Statistics for Modern Biology',  
S.P. Holmes and W. Huber.

**Maintainer** Wolfgang Huber <wolfgang.huber@embl.org>

**License** LGPL

**Depends** R (>= 3.5), tibble

**Suggests** knitr, BiocStyle

**VignetteBuilder** knitr

**biocViews** ExperimentData

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| brcalymphnode | <i>Coordinates and cell types in a histopathology slide of a breast cancer patient's lymph node</i> |
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## Description

Coordinates and cell types in a histopathology slide of a breast cancer patient's lymph node.

**Usage**

```
data("brcalymphnode")
```

**Format**

A data.frame.

**Details**

This dataset is used as an example in the 'Image data' chapter. See there for more details about it.

**Examples**

```
data("brcalymphnode")
plot(x = brcalymphnode$x, y = brcalymphnode$y, pch=".", col = brcalymphnode$class)
```

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| ukraine_dists | <i>Coordinates of and pairwise distances between hero cities and oblast capitals in Ukraine</i> |
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**Description**

This dataset is used as an example in the 'Multivariate methods for heterogeneous data' chapter.

**Usage**

```
data("ukraine_dists")
data("ukraine_coords")
```

**Format**

ukraine\_dists is an object of S3 class dist. ukraine\_coords is a tibble.

**Details**

The two datasets were constructed using the R code in the file 'ukraine-dists.R' in the 'scripts' directory of this package. Briefly, the city and place names are hardcoded in the script, coordinates were queried from OpenStreetMap using the geo function in the **tidygeocoder**, and pairwise geodesic distances computed using the geodist function from the eponymous package.

**Examples**

```
data("ukraine_coords")
plot(x = ukraine_coords$lon, y = ukraine_coords$lat, pch = 16, cex = 0.7, col = "#0057b7", asp = 1 / cos(pi / 180 * lon),
text(x = ukraine_coords$lon, y = ukraine_coords$lat, labels = ukraine_coords$city, adj = c(0.5, -0.2))
```

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## \* datasets

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