Sensitivity

This is the probability of a positive test result from patients with disease **a/a+c**. Sensitivity of a test gives values from 0 to 1 (0-100%) and tells us how the test captures the presence of the reference condition in the body.

$$\text{sensitivity} = \frac{\text{number of true positives}}{\text{number of true positives} + \text{number of false negatives}}$$

$$= \text{probability of a positive test given that the patient is ill}$$

For example, if he had a mammography screening test for breast cancer with 100% sensitivity, it would mean that **all** women who had breast cancer, the tumour was **actually detected**. We have a group of 4 women - Lucy, Jane, Cathie and Lenka. Lucy has breast cancer. All women undergo the screening mammography. It detects Lucy and Jane as positive. Lucy is really positive. Jane is a false positive. Cathie and Lenka are actually negative. Nobody is falsely negative. When you enter the values into the formula above, we find that the test showed 100% sensitivity.

Test	Disease +	Healthy-	Total
+	a	b	a+b
-	c	d	c+d
Total	a+c	b+d	n

🔍 *For more information see Requirements at Examination Methods.*

Links

Related Articles

- Specificity

Bibliography

- BENCKO, Vladimír. *Epidemiologie, výukové texty pro studenty.* 2nd edition. Karolinum, 2002. ISBN 80-246-0383-7..

- BENCKO, Vladimír. *Biomedicínská statistika.* 1st edition. Karolinum, 2003. ISBN 80-246-0763-8.

- KUPKA, Karel. *Nukleární medicína.* 1st edition. Karolinum, 2007. ISBN 978-80-903584-9-2.