Specificity

Specificity is the probability of a negative result in healthy patients **b/b+d**. The specificity of a test reflects on the ability of a test to identify true negatives.

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

$$= \text{probability of a negative test given that the patient is well}$$

For example, if he had a mammography screening for breast cancer with 100% specificity, it would mean that **all** women without breast cancer that underwent screening tested negative. We have a group of 4 women - Lucy, Jane, Cathie and Lenka. has breast cancer. 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 about 67% specificity (specificity = 0.67). One woman with no tumor was identified as positive (we have one woman falsely positive).

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 Article

- Sensitivity

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.