

Abb.105 Praktische Beispiele für die Berechnung von Sensitivität und Spezifität eines anthropometrischen Ernährungszustands-Indikators

a) Klassifizierung durch Messung des mittleren Oberarmumfanges*

| Indikator "wahren" Ernährungs- zustand | Klassifizierung durch Messung des mittleren Ober- armumfanges (MUAC) | | | | Sensi- tivität | Spezi- fität |
|--|--|----------|---|----------|-------------------|-----------------|
| | positiv bei Wert unter 12cm 13,5cm | | negativ bei Wert über 12cm 13,5cm | | | |
| Unternerährt (wenn Gewicht/Größe unter 80% des Standards N=37) | 17 | F 34 | 20 | fF 3 | 0.46 | 0.92 |
| Normalernährt (wenn Gewicht/Größe 80% des Standard und mehr) N=271 | 16 | fG 97 | 255 | G 174 | 0.94 | 0.64 |

nach:

SENSITIVITY AND SPECIFICITY OF MUAC IN CLASSIFICATION OF ACUTE MALNUTRITION.

| MUAC (cm) | Weight-for-height | | | Total | Sensi- tivity | Speci- ficity |
|--------------|-------------------|---------------|----------------|-------|------------------|------------------|
| | <70% | <80% | ≥80% | | | |
| <12.0 | 4 | 13 | 16 | 33 | 0.42 | |
| ≥12.0 | 2 | 18 | 255 | 275 | | 0.94 |
| <12.5 | 5 | 17 | 34 | 56 | 0.55 | |
| ≥12.5 | 1 | 14 | 237 | 252 | | 0.87 |
| <13.5 | 6 | 28 | 97 | 131 | 0.90 | |
| ≥13.5 | 0 | 3 | 174 | 177 | | 0.64 |
| Total | 6 (2.0%) | 31 (10.3%) | 271 (89.7%) | 308 | | |

* (aus: Thompson, B.: Measures of nutritional status. Lancet i(8535): 740-741 (1987) Lit.17.093

Sensitivity and specificity of indicators in identifying children with low weight-for-age

| Indicator | Prevalence | Definition of true malnutrition | | | | | |
|---|------------|---------------------------------|-------------|---------------------------|----------------------------|-------------|---------------------------|
| | | Weight-for-age <75% median | | | Weight-for-age <60% median | | |
| | | Sensitivity | Specificity | Positive predictive value | Sensitivity | Specificity | Positive predictive value |
| % | | | | | | | |
| Arm circumference (cm) | | | | | | | |
| <12.5 | 2.7 | 15.8 ^a | 99.5 | 85.4 | 55.8 | 98.0 | 28.2 |
| <13.0 | 5.3 | 27.2 ^a | 98.4 | 74.9 | 75.0 ^b | 95.6 | 19.2 |
| <13.5 | 9.8 | 40.3 ^{a,d} | 95.4 | 60.0 | 84.6 ^c | 91.2 | 11.7 |
| <14.0 | 18.3 | 56.1 ^{a,d} | 88.1 | 44.7 | 90.4 | 82.7 | 6.7 |
| Arm circumference-for-age (% median) | | | | | | | |
| <80 | 5.6 | 28.3 | 98.3 | 74.5 | 76.9 | 95.4 | 18.9 |
| <85 | 16.9 | 56.8 | 90.0 | 49.3 | 92.3 | 84.2 | 7.5 |
| Arm circumference-for-height (% median) | | | | | | | |
| <85 | 4.4 | 19.6 | 98.2 | 64.5 | 51.0 | 96.2 | 14.8 |
| <90 | 16.1 | 47.7 | 89.3 | 43.2 | 77.6 | 84.7 | 6.2 |
| Weight-for-height (% median) | | | | | | | |
| <85 | 2.6 | 15.2 | 99.6 | 86.7 | 42.3 | 98.0 | 22.4 |
| <90 | 8.5 | 36.4 | 96.3 | 62.8 | 73.1 | 92.4 | 11.8 |

^{a-c} Arm circumference sensitivity significantly higher than arm circumference-for-height when compared at the specificity level indicated for arm circumference. ^a $P < 0.001$; ^b $P < 0.01$; ^c $P < 0.05$. ^d Arm circumference sensitivity significantly lower than arm circumference-for-age when compared at the specificity level indicated for arm circumference ($P < 0.001$).

(aus: Trowbridge, F.L., Staehling, N.: Sensitivity and specificity of arm circumference indicators in identifying malnourished children. Amer.J.clin.Nutr. 33: 687-696 (1980) Lit.6525
anderes Beispiel auch in:

Huffman, S.L., Krasovec, K.: Maternal nutritional risk assessment in Bangladesh. S.100-103 in T.G.Taylor, N.K.Jenkins (Eds): Proc. XIIIth Intern.Congr.Nutr., Brighton. J.Libbey, London, Paris, 1986 (Lit.16.933)