

## Bayes-Statistik

Wie hängt Glaubensgrad und Wahrscheinlichkeit zusammen?

Was ist ein „duch book“, und welche Konsequenzen hat das für unsere Glaubensgrade?

Was ist die Bedeutung von Kohärenz in der Bayes-Statistik?

Was funktioniert „updating“ (das vernünftige Aktualisieren der Glaubensgrade)?

Was bedeutet Gewinnfunktion? (utility function), geben Sie ein Beispiel!

Was ist der Zusammenhang zwischen lernen und Aktualisieren der Glaubensgrade? (Hilfe:KL-Divergenz)

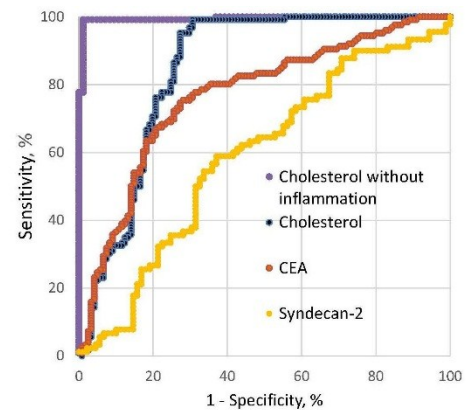
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## Diagnostische Tests:

6 Which marker has the best diagnostic performance in detecting neoplastic pleural involvement (Figure 1)?

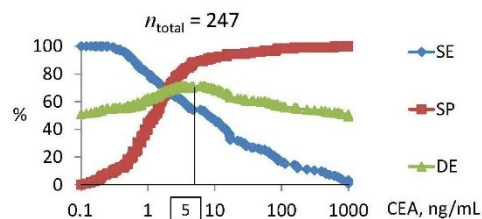
- \* a) Cholesterol with non-inflammatory fluid cytology
- b) Cholesterol in itself
- c) CEA
- d) Syndecan-2
- e) ROC curves do not help to answer the question.

**Figure 1.** Receiver operating characteristic (ROC) curves of CEA, cholesterol and syndecan-2 analyses as a measure to detect neoplastic pleural involvement.



7 Cut-off value of effusional CEA level is selected to maximize the diagnostic efficacy (Figure 2). Raised CEA concentration is a

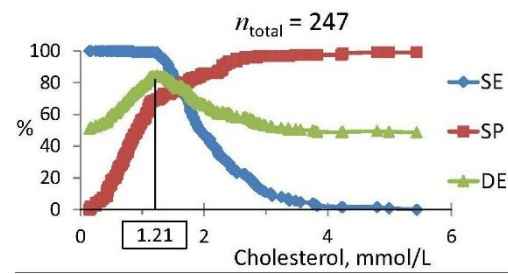
- a) moderately sensitive and moderately specific indicator.
- b) highly sensitive and highly specific indicator.
- c) highly sensitive and moderately specific indicator.
- d) highly sensitive and poorly specific indicator.
- \* e) highly specific and poorly sensitive indicator.



**Figure 2.** Diagnostic efficacy (DE), sensitivity (SE) and specificity (SP) of CEA assay as a function of cut-off values in detection of neoplastic pleural involvement.

- 8 Cut-off value of effusional cholesterol is selected to maximize the diagnostic efficacy (Figure 3). Raised cholesterol concentration in itself is a

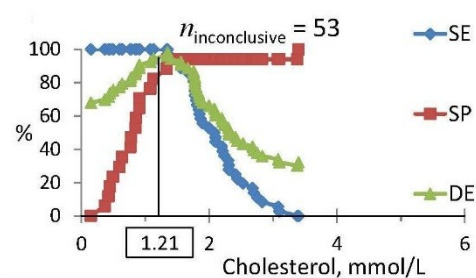
- a) moderately sensitive and moderately specific indicator.
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- \* c) very highly sensitive and moderately specific indicator.
- d) highly specific and moderately sensitive indicator.
- e) highly specific and poorly sensitive indicator.



**Figure 3.** Diagnostic efficacy (DE), sensitivity (SE) and specificity (SP) of cholesterol assay as a function of cut-off values in detection of neoplastic pleural involvement for the total material.

- 9 Cut-off value is selected to maximize the diagnostic efficacy (Figure 4). Regarding cases with inconclusive fluid cytology, raised cholesterol concentration in itself is a

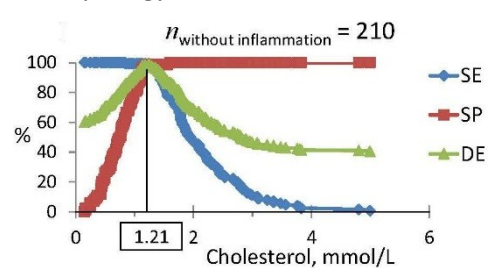
- a) poorly sensitive and poorly specific indicator.
- \* b) very highly sensitive and highly specific indicator.
- c) highly sensitive and poorly specific indicator.
- d) moderately specific and poorly sensitive indicator.
- e) highly specific and poorly sensitive indicator.



**Figure 4.** Diagnostic efficacy (DE), sensitivity (SE) and specificity (SP) of cholesterol assay as a function of cut-off values in detection of neoplastic pleural involvement for cases with inconclusive effusion cytology.

- 10 Cut-off value is selected to maximize the diagnostic efficacy (Figure 5). Raised cholesterol concentration in combination with non-inflammatory fluid cytology, is a

- a) moderately sensitive and moderately specific indicator.
- \* b) very highly sensitive and very highly specific indicator.
- c) highly sensitive and moderately specific indicator.
- d) highly specific and moderately sensitive indicator.
- e) highly specific and poorly sensitive indicator.



**Figure 5.** Diagnostic efficacy (DE), sensitivity (SE) and specificity (SP) of cholesterol assay as a function of cut-off values in detection of neoplastic pleural involvement for cases without pleural inflammation.

