**Sensitivity**

Testin, gerçekten hasta olan kişiler arasından kaç tanesini doğru olarak (yani hasta olarak) sınıflandırdığını gösterir.

Sensitivity is expressed as the proportion of correctly classified as true positives among the total disease. In other words, sensitivity of a test is its ability to correctly identify the proportion of patients with the disease. It rarely misses a patient with the disease. A highly sensitive test is useful, when someone do not want to miss a disease, in the early stage of diagnostic work up and in screening the population for the target disorder. Moreover a sensitive test is most useful if it is negative.The sensitivity of a test is defined as the proportion of people with disease who will have a positive result. A test is the ability to find patients from real patients.The rate of those who actually tested positive among the sick patients was ", DataRow()$Estimate, ". The test finds ", sayi, " percent of people who have the disease.

**Specificity**

Testin, hasta olmayan kişilerden kaçını gerçekten doğru olarak (hasta olmayan) sınıflandırdığını gösterir.

The percentage of test-negative outcomes among non-ill patients was ", say, ". The ability of a test to separate intact ones from real intact ones.

**Efficiency**

In fact, it is the total correct diagnosis rate as test (patient and sound). It is found by dividing the sum of real positive and true negatives by the total number of subjects. If the sensitivity and specificity of the two tests are the same, the accuracy value may be different. This measures the portion of all decisions that were correct decisions. It falls in the range from 0 to 1, with 1 being the best score. ",DataRow()$Estimate, " is", degeff

**Pred. value of pozitif test**

The positive predictive value of test is the probability of a study subject who has the disease when restricted to those subjects who had a positive test. It can be calculated as. It can be observed that denominator of positive predictive value is the number of subjects who test positive.The result of a test is a reflection of the truth. Sensitivity and specificity measure how accurately the patient or intact testimony of the test is true when the test determines the ability of the patient and the strong to select between the actual patient and the firm. In short, the positive predictive value is the response of a physician who has a positive outcome to what the likelihood of this patient being a real patient is.

**Pred. value of negatif test**

The negative predictive value of a test is the probability of a study subject who will not have the disease when restricted to those subjects who test negative. The negative predictive value is the answer to the question of what is the probability that this person will be truly robust when encountered with a negative test result.

**Likelihood ratio of positive test (LR+)**

Likelihood ratio is a very useful and mostly widely applied measure of diagnostic accuracy. It can summarize information about the diagnostic test, where it combines the values of sensitivity and specificity. It indicates how much a positive or negative test result changes the likelihood that a patient would have the disease. This measure incorporates both the sensitivity and specificity of the test and provides a direct estimate of how much a test result will change the odds of having a disease. The likelihood ratio for a positive result (LR+) shows how much the odds of the disease increases when a test is positive.

**Balanced Accuracy**

The balanced accuracy is the average of Sensitivity and specificity can be defined also as the average accuracy obtained on either class.

**dice's Index**

The Dice score is often used to quantify the performance of image segmentation methods.

There you annotate some ground truth region in your image and then make an automated algorithm to do it.

You validate the algorithm by calculating the Dice score, which is a measure of how similar the objects are.

So it is the size of the overlap of the two segmentations divided by the total size of the two objects.

The Dice index is based on the harmonic mean.

Dice (1945) proposed an index which is the conditional probability that one (of two)

randomly chosen raters classifies an item as positive given that the other rater classified

the item as positive. The Dice and Jaccard coefficients are the most commonly used

measures of spatial overlap for binary labels. In both cases, the values for the

coefficients range from zero (no overlap) to one (perfect agreement). This is also sometimes known as the relative overlap measure. As all these

measures are related to each other, typically only one or the other is calculated. The Dice coefficient has been shown to be a special case of the kappa coef-

ficient, a measure commonly used to evaluate inter-observer agreement.

As defined, both of these measures are symmetric, in that over- or undersegmentation

errors are weighted equally.

Dice's coefficient measures how similar a set and another set are. It can be used to measure how similar two strings are in terms of the number of common bigrams

**yule's q ve phi**

https://books.google.com.tr/books?id=j7aawGLbtEoC&pg=PA155&lpg=PA155&dq=yule+phi+between+1&source=bl&ots=0l-UISJ5-q&sig=VC36cRvEtsZ7YPrFQsdb12TG-oA&hl=tr&sa=X&ved=0ahUKEwji49z6nIzWAhVoIpoKHbewDLcQ6AEIPzAD#v=onepage&q=yule%20phi%20between%201&f=false

https://books.google.com.tr/books?id=iMYWBAAAQBAJ&pg=PA66&lpg=PA66&dq=yule+phi+between+1&source=bl&ots=s7VMq7dYWH&sig=V2zNsBkvKCopp0Yn2oQKSKAu1z0&hl=tr&sa=X&ved=0ahUKEwji49z6nIzWAhVoIpoKHbewDLcQ6AEITDAF#v=onepage&q=yule%20phi%20between%201&f=false

This index is a special case of Goodman and Kruskal's gamma. It is a function of the cross-ratio and is independent of the marginal totals. It has a range of -1 to 1.

The Yule s Q is a nominal level measure of

association that could be used to determine the association

or relationship between variables (Baddie and Fred, 1995;

Kolawole, 2001). Yule originated this measure of

association for variables which have two and only two

values. It is used with 2 x 2 tables, each variable being

expressed as a dichotomy. Yule s Q is equivalent to Goodman and Kruskal s Gamma. Yule s Q appropriate only for 2x2 tables (2 rows, 2 columns).

Yule s Q captures that in a measure 0 (no association) and -1, +1 (strong association).

Rule of Thumb for interpreting Yule s Q: 0 to 0.24 (virtually no relationship), 0.25 to 0.49 (weak relationship),

0.50 to 0.74 (moderate relationship), 0.75 to 1 (strong relationship).

**phi**

Phi is a chi-square-based measure of association that involves dividing the chi-square statistic

by the sample size and taking the square root of the result.

The Phi Coefficient is nominal measure of association for nominal variables

(Kolawole, 2001). It measures the degree of association

between two variables that are expressed as a dichotomy. Phi is very similar to Yule s Q.It is only for 2x2 table,

ranges from -1 to 1, 0 (no assoc.). Close to 0 it shows little association between variables. Close to 1, it indicates a strong positive association.

Close to -1 it shows a strong negative correlation.

**contingency coefficient**

Contingency coefficient is another chi square based measure of association, and one that also

adjusts for different sample sizes. When there is no relationship between two variables, Contingency coefficient = 0.

The contingency coefficient cannot exceed the value Contingency coefficient = 1. The contingency coefficient may be less than

1 even when two variables are perfectly related to each other. This means that it is not as desirable a measure of association as

those which have the range 0 to 1. The maximum value possible depends on the number of rows and columns in a table.

**goodman and kruskal gamma**

The Goodman s and Kruskal s Gamma g is an

ordinal measure of association between two variables

(Adeyemi, 1998). It measures the degree of agreement or

association between two ordinal-level data. Gamma g can

be analyzed in two ways. The first is when no ties occur

in the rankings while the second way is when there are

ties in the rankings (Aghenta, 2000). A symmetric measure of association between two ordinal variables that ranges between -1 and 1.

Values close to an absolute value of 1 indicate a strong relationship between the two variables.

Values close to 0 indicate little or no relationship. For 2-way tables, zero-order gammas are displayed.

For 3-way to n-way tables, conditional gammas are displayed.

2x2 tablolarda gamma, yule's q'ya eşittir.