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Association of human breast cancer CD44^{-}/CD24^{-} cells with delayed distant metastasis

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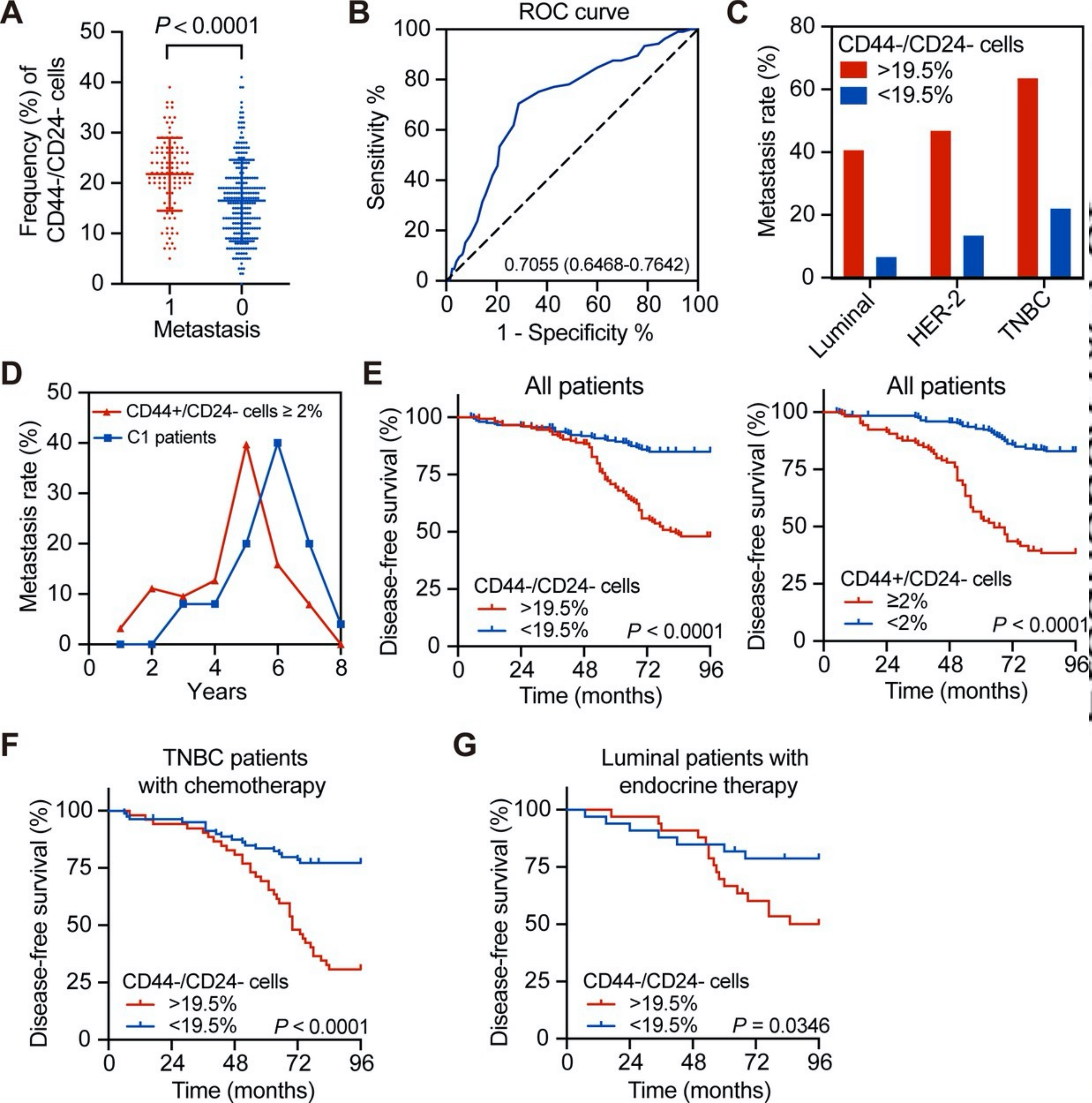
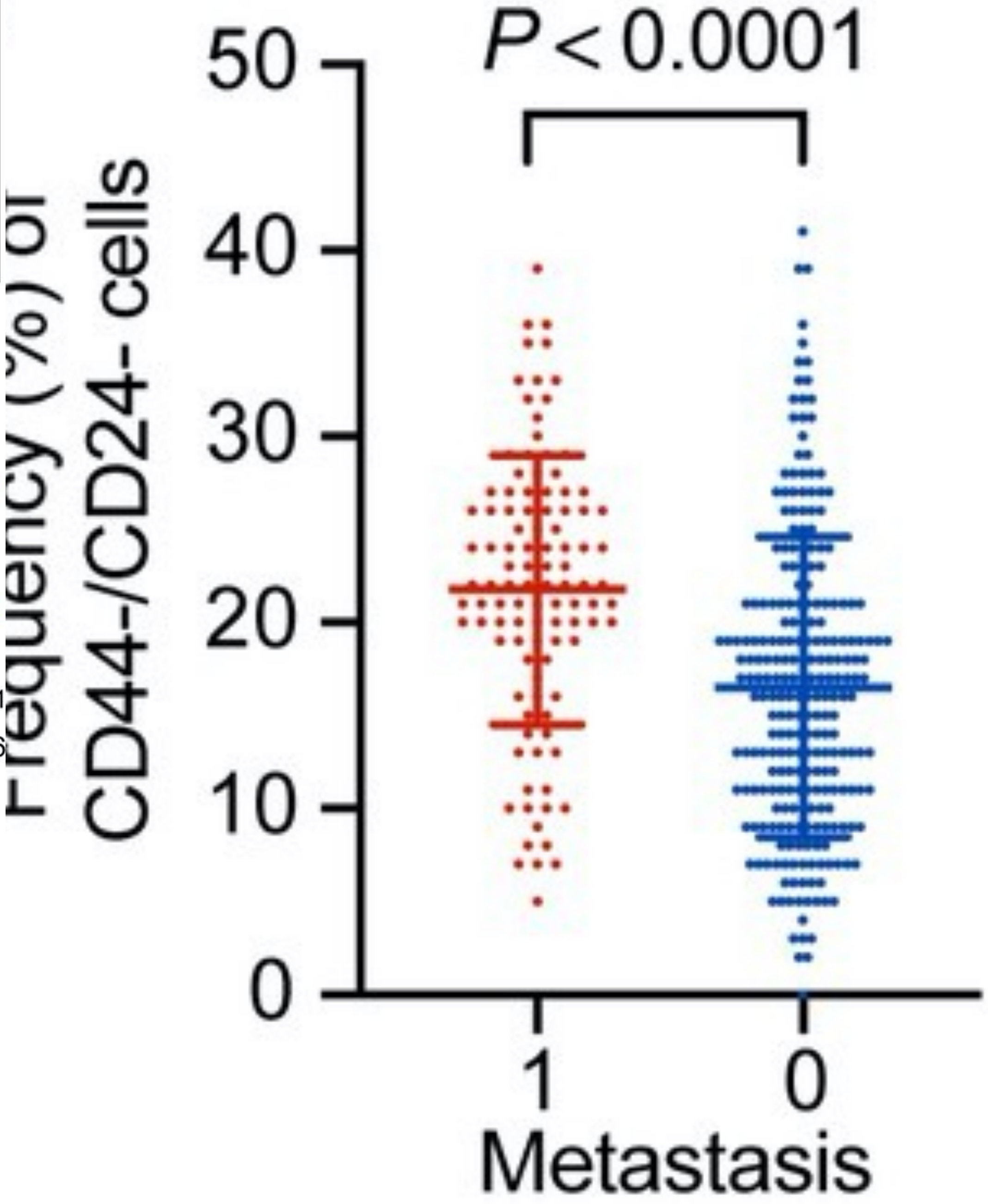
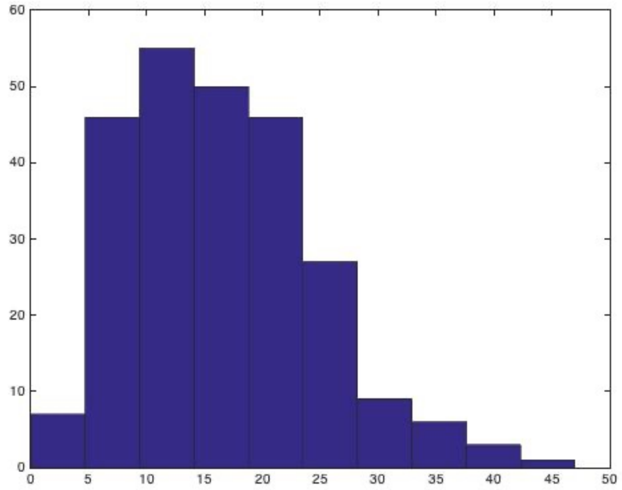

A
P < 0.0001
Frequency (%) of CD44-/CD24- cells
Metastasis
B
ROC curve
Sensitivity %
1 - Specificity %
0.7055 (0.6468-0.7642)
C
Metastasis rate (%)
CD44-/CD24- cells
>19.5%
<19.5%
Luminal
HER-2
TNBC
D
Metastasis rate (%)
CD44+/CD24- cells ≥ 2%
C1 patients
Years
E
All patients
Disease-free survival (%)
CD44-/CD24- cells
>19.5%
<19.5%
P < 0.0001
Time (months)
All patients
Disease-free survival (%)
CD44+/CD24- cells
≥2%
<2%
P < 0.0001
Time (months)
F
TNBC patients with chemotherapy
Disease-free survival (%)
CD44-/CD24- cells
>19.5%
<19.5%
P < 0.0001
Time (months)
G
Luminal patients with endocrine therapy
Disease-free survival (%)
CD44-/CD24- cells
>19.5%
<19.5%
P = 0.0346
Time (months)

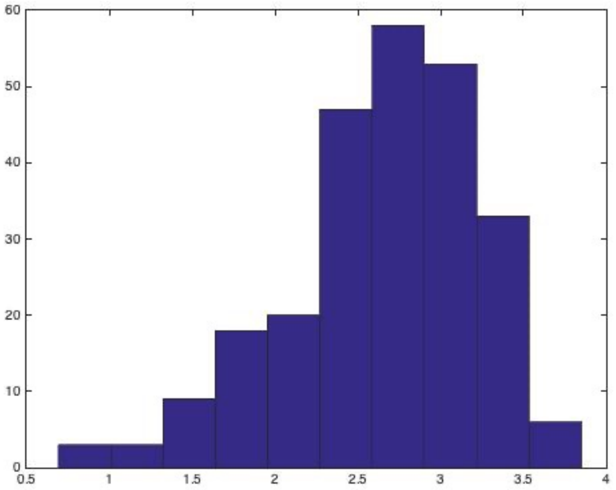

P < 0.0001
CD44-/CD24- cells
Metastasis

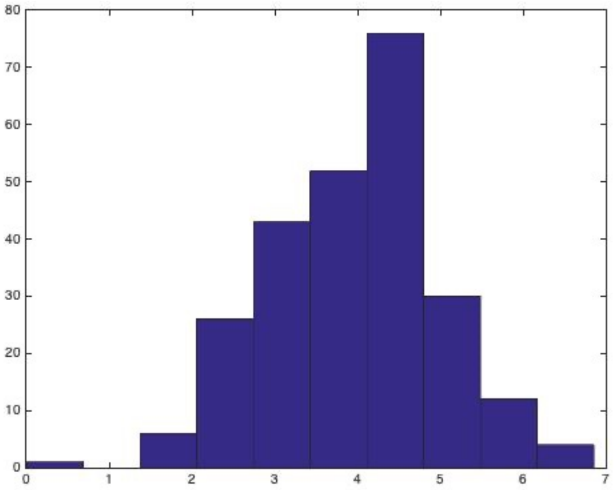
metastasis	
Yes(%)	No(%)
10	19
21	23
22	34
13	21
29	15
27	10
28	5
32	13
36	11
27	18
24	14
27	7
22	3
26	9
21	16
22	17
8	7
26	12
7	3
23	6
18	9
21	21
29	21
35	19
26	19
19	9
15	11
20	26
27	21
24	17
16	7
33	13
7	28
27	8
5	12
39	12
20	32
21	13

Metastasis yes: N=105
Metastasis no: N=250

Normal distribution or nah?







N
sk=0.6766

log(N)
NaN

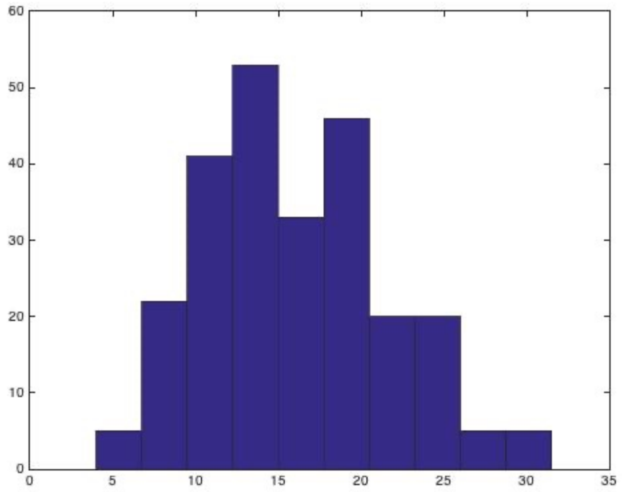
sqrt(N)
-0.1669

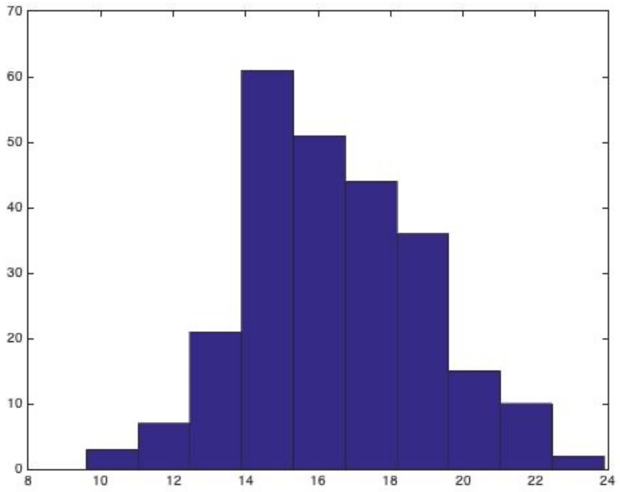
S = skewness(X) returns the sample skewness of the values in X. For a vector input, S is the third central moment of X divided by the cube of its standard deviation.

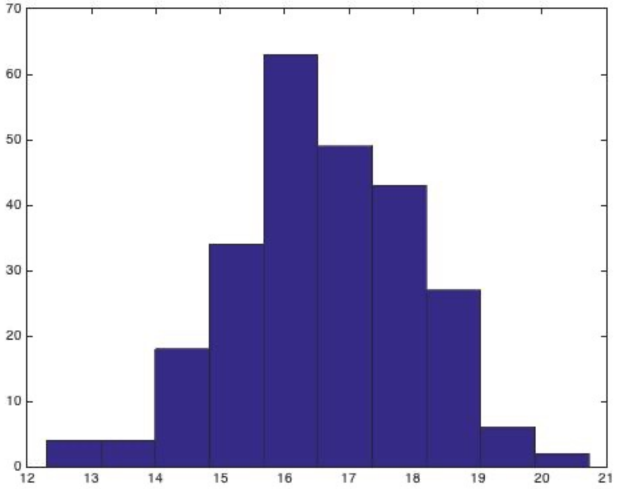
The third central moment is the measure of the lopsidedness of the distribution; any symmetric distribution will have a third central moment, if defined, of zero. The normalised third central moment is called the skewness, often γ. A distribution that is skewed to the left (the tail of the distribution is longer on the left) will have a negative skewness. A distribution that is skewed to the right (the tail of the distribution is longer on the right), will have a positive skewness.

The central limit theorem states that if you have a population with mean μ and standard deviation σ and take sufficiently large random samples from the population with replacement , then the distribution of the sample means will be approximately normally distributed.

Draw 250 samples from this population, randomly with replacement.







Sample size =2
sk=0.4548

10
0.2399

30
-0.0493