

Lesson 19. 評価の指標

§ B. ROC曲線

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		疾患	
		+	-
検 査	+	a (真陽性)	b (偽陽性)
	-	c (偽陰性)	d (真陰性)

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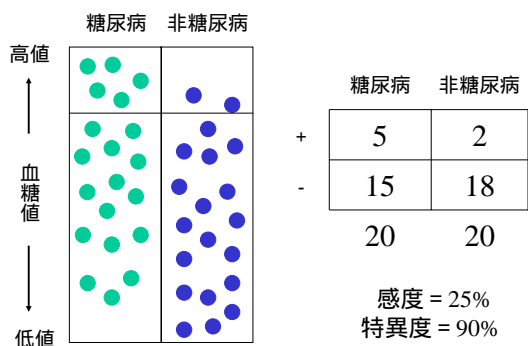
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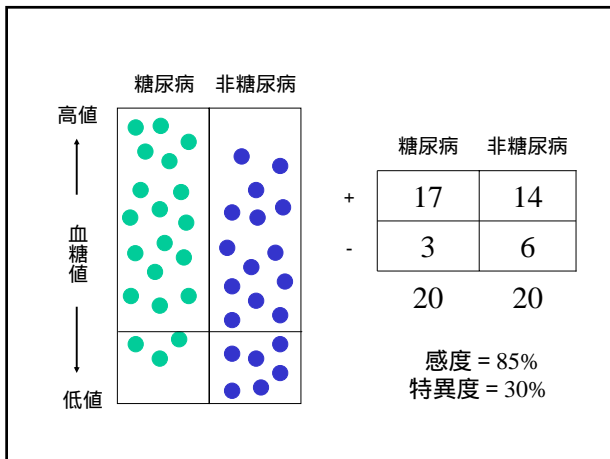
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### 感度と特異度の関係

- 感度を高くすれば特異度は低くなる。
- 特異度を高くすれば感度は低くなる。
- 感度と特異度は駆け引き trade-off の関係

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### カットオフ値

- 陽性と陰性を区切る境界点の値
- Cut-off point
- 最適な感度と特異度で決まる。

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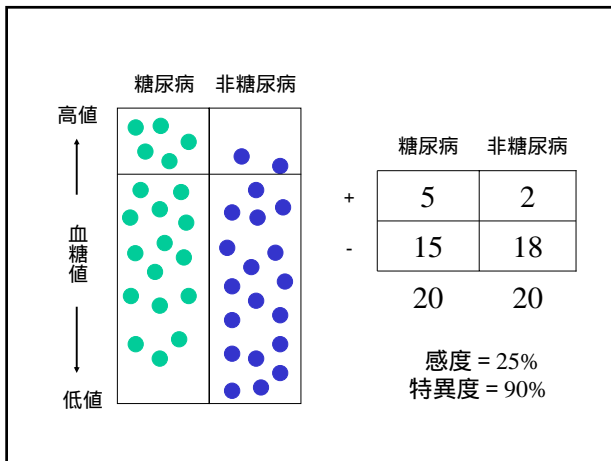
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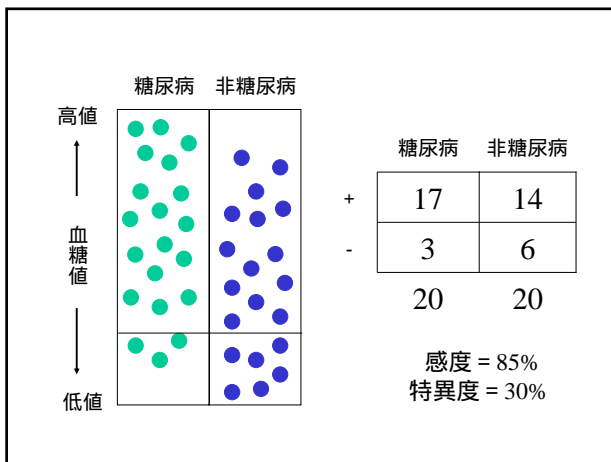
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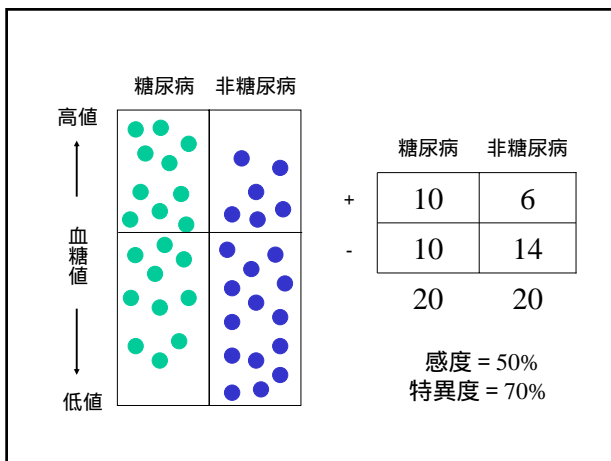
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### 偽陽性率

- False positive rate

$$\text{偽陽性率} = \frac{b}{b+d} \times 100\%$$

$$= 100 - \text{特異度}\%$$

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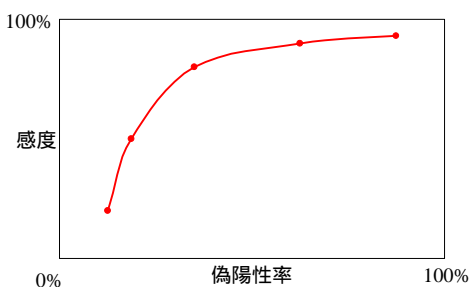
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### ROC曲線

ROC (Receiver Operating Characteristic) curve



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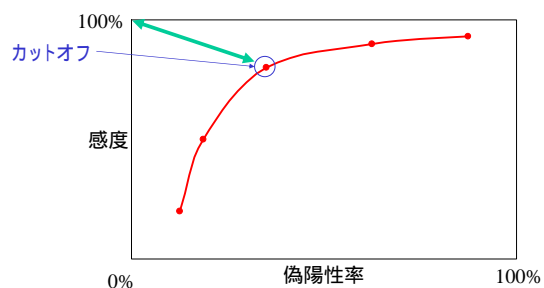
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### ROC曲線の判定-1



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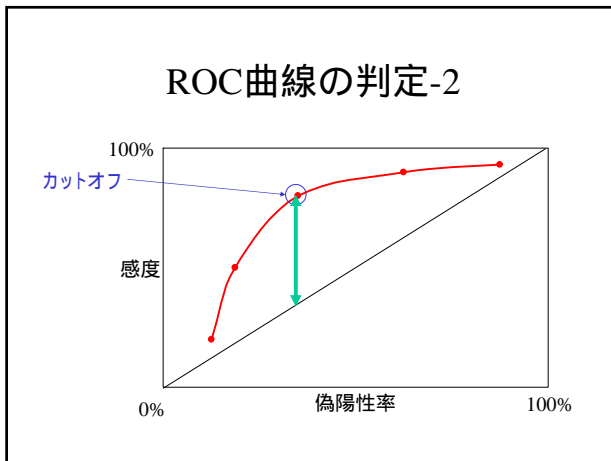
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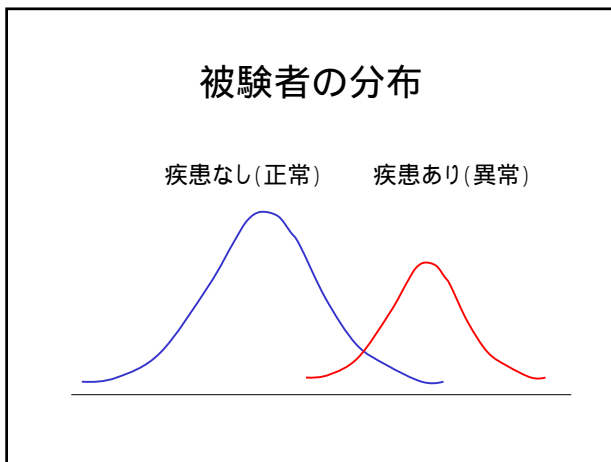
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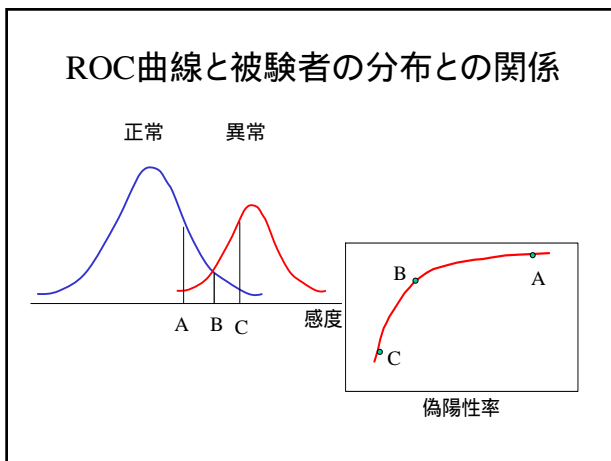
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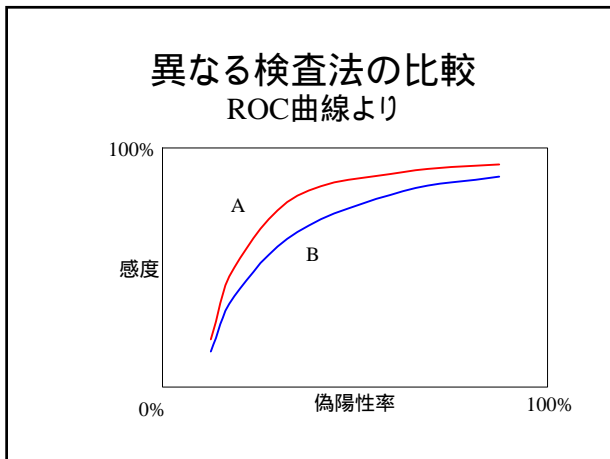
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