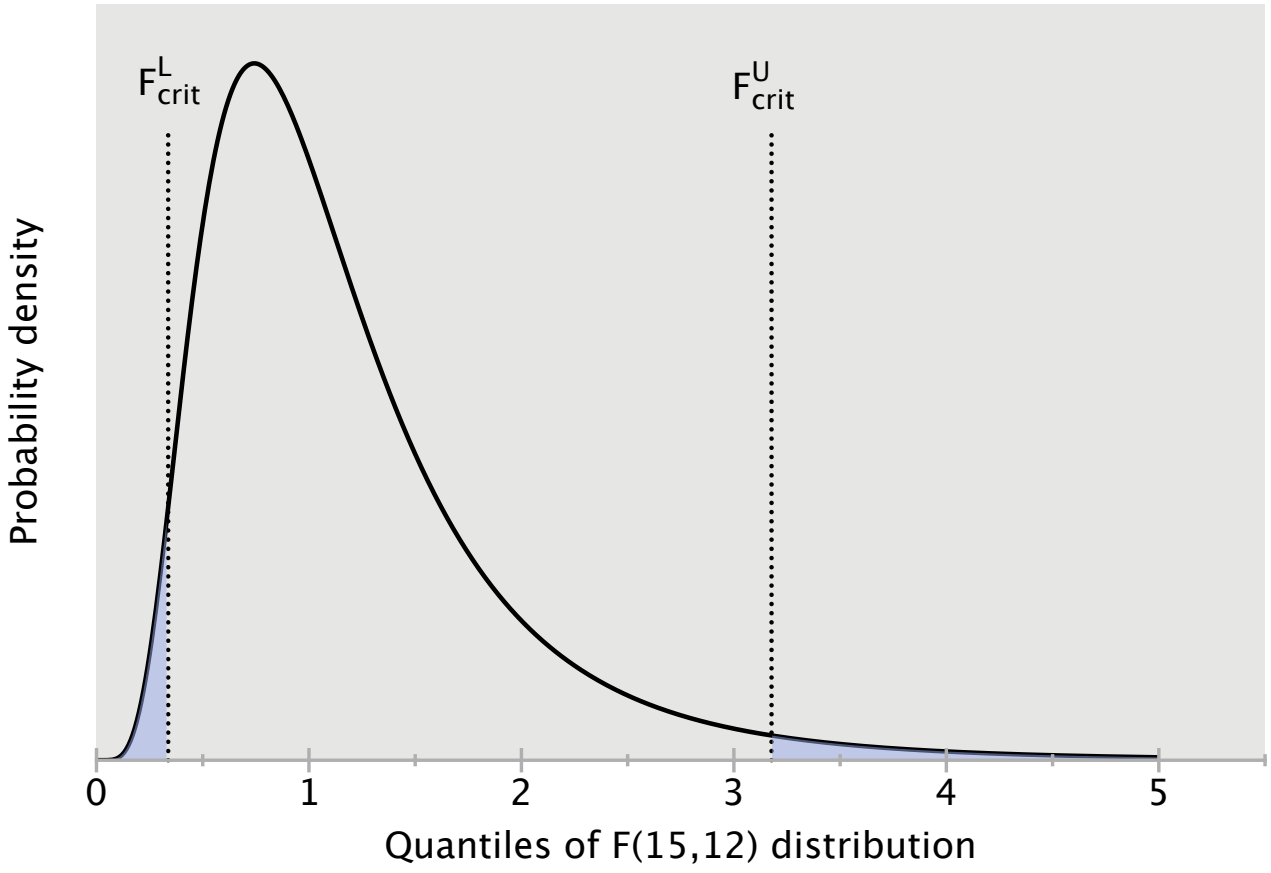
The F Distribution

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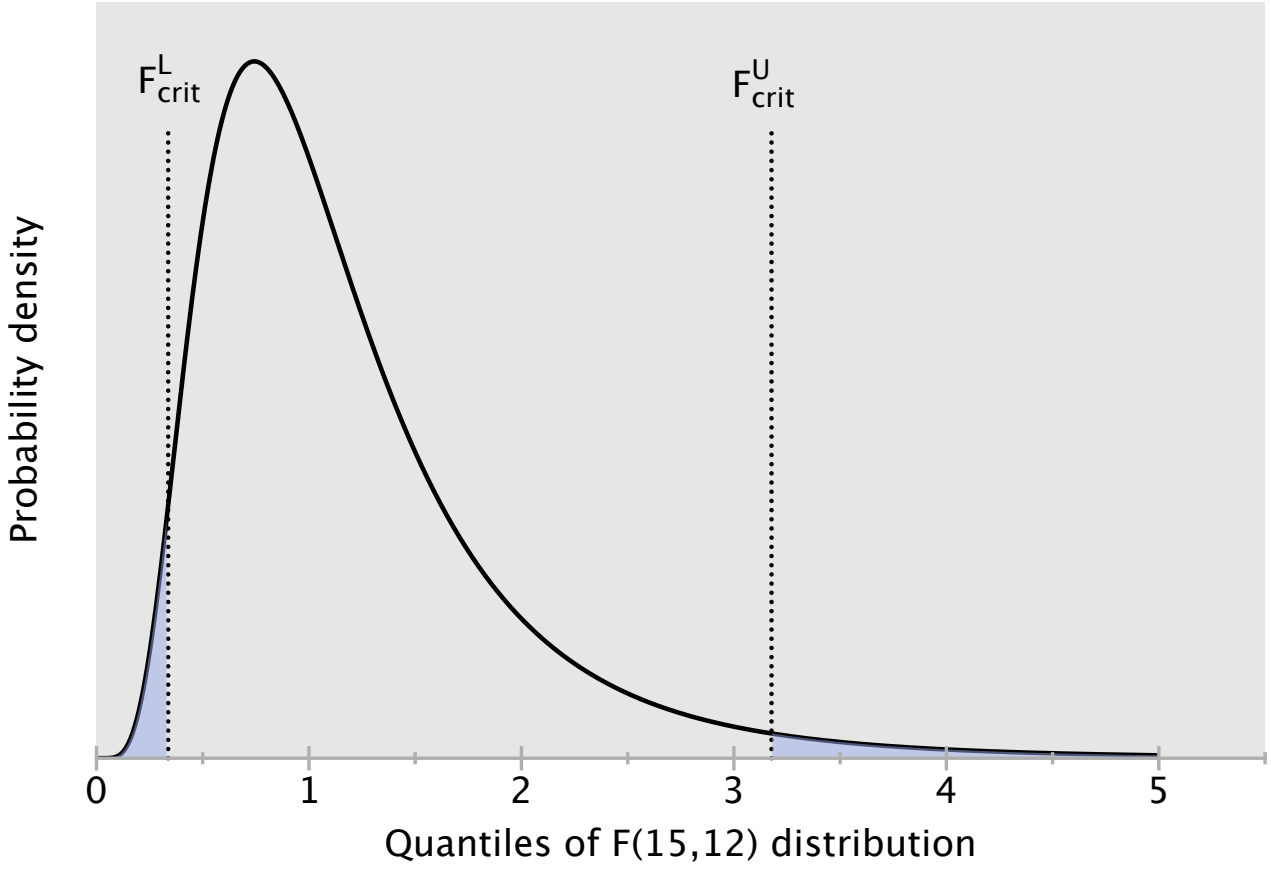


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- We can derive a parametric CI for the ratio of population variances using the F-distribution, which has two parameters: ν_a and ν_b, the degrees of freedom of the numerator and denominator, respectively.

$$\frac{F_{\text{obs}}}{F_U} < \frac{\sigma_a^2}{\sigma_b^2} < \frac{F_{\text{obs}}}{F_L}$$

Distributions Related to the Normal Distribution

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- the ratio of two χ^2 variables follows an F_{ν_1,ν_2} distribution, where ν_1 is the degrees of freedom of the numerator and ν_2 is the degrees of freedom in the denominator.