

# **Investigating on choosing pivot:**

A study on Quick sort

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# Quick Sort

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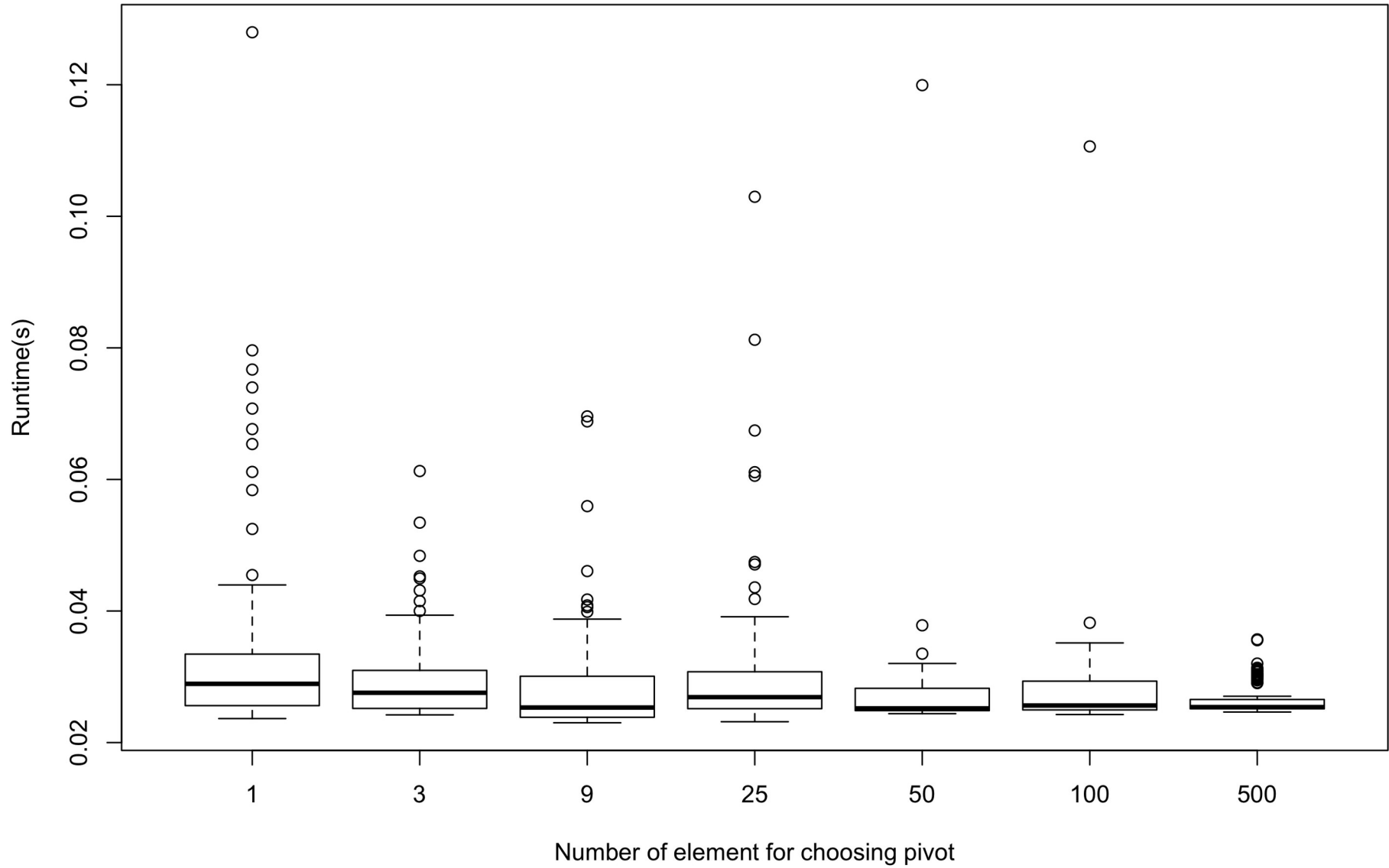
- Worst case:  $\Theta(n^2)$
- Expected running time:  $\Theta(n \log n)$
- Good pivot assures the expected running time.

# Choosing Pivot

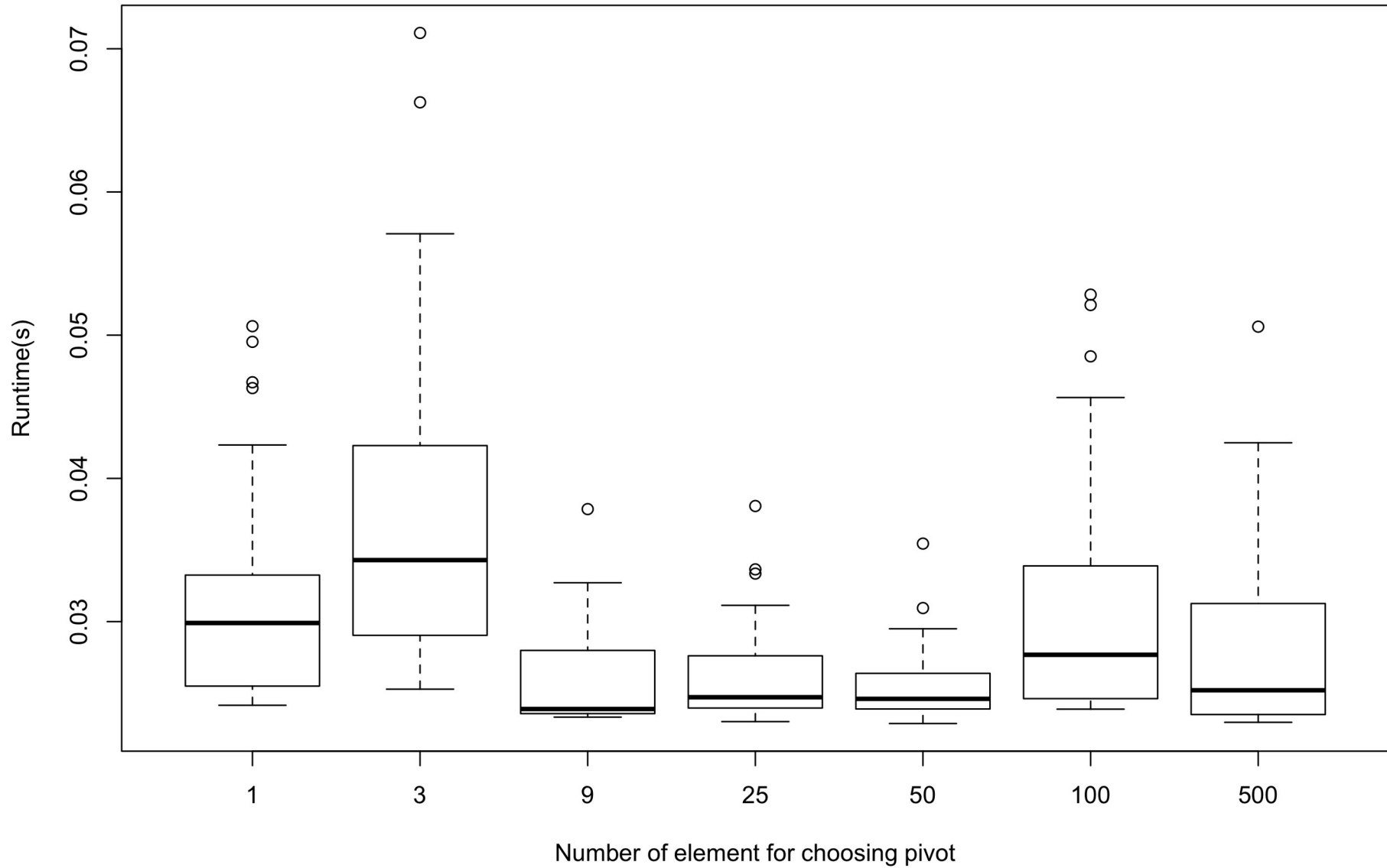
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- Random element
- Median of three
- Taking more elements from the list for choosing pivot
  - How much?

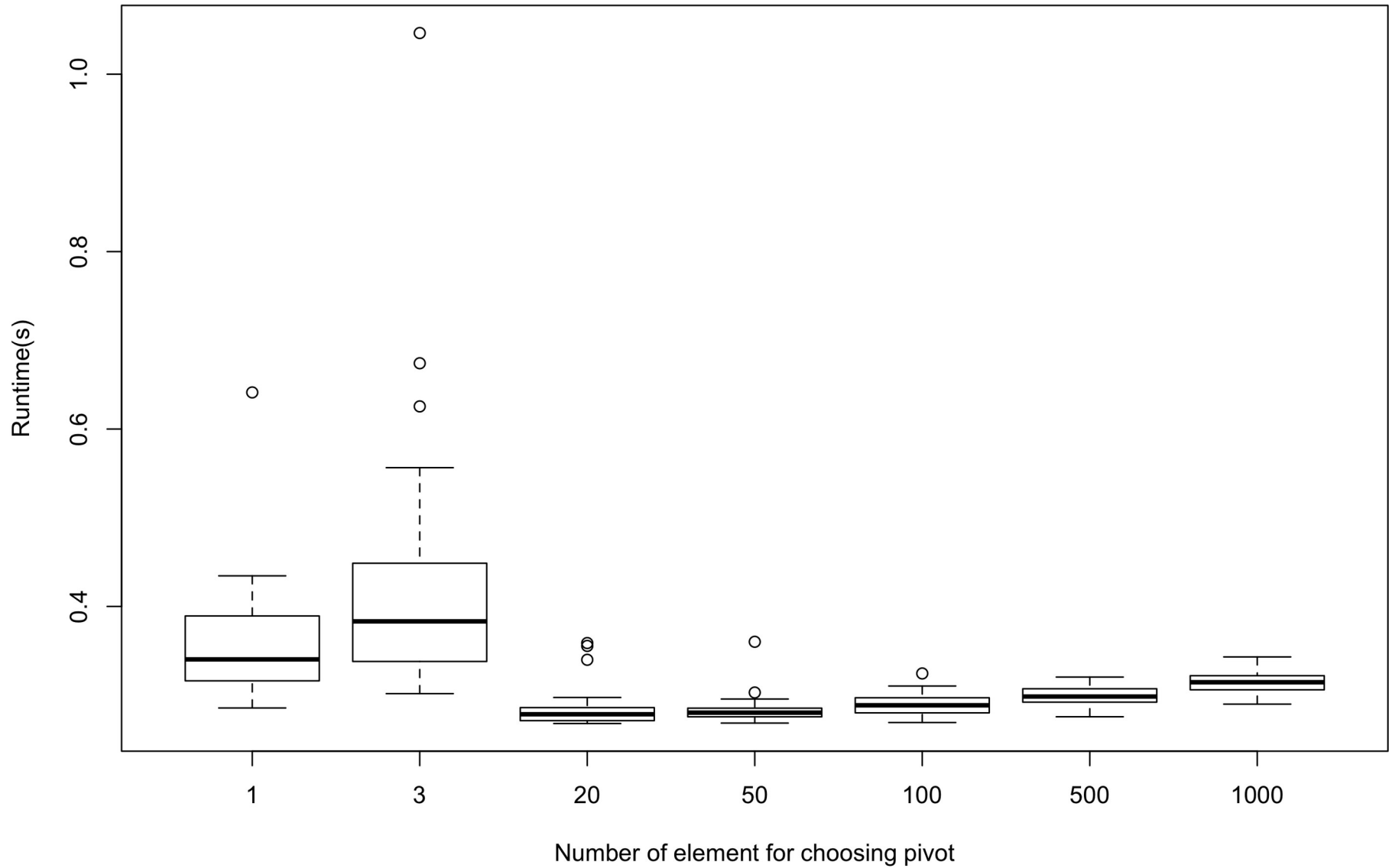
# Array size:10k



# Sorted array size:10k



# Array size:100k



# Sorted array size:100k

