Outcome of mechanically aligned Navigation-assisted TKA

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Accurate alignment & Soft tissue balancing are of paramount importance for the longevity of TKA

Navigation system
- Exact parameters of AP and ML alignment
- More precise intra-operative real-time control of the axes obtained by correction
- However, soft tissue balancing remains a challenge

History
- Insertion of pedicle screws
- In 1997, first case performed in TKA
- Now, various navigation systems are currently available

Improvements
- Better alignment and restoration of mechanical axis
- Better positioning of component
- Better gap balance

Benefits
- Improved implant survivorship
- Better functional outcomes
- Greater patients satisfaction
Controversy

- Superior radiographic alignment
- Functional benefits are still questionable
- Malalignment by errors in navigation; due to several factors
- However, improvements in implant survivorship over long-term study
- More affordable navigation systems are coming

Current Outcomes of navigation

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<tr>
<th>Authors</th>
<th>Journal (year)</th>
<th>Mechanical Axis/Outliers</th>
<th>Femoral component</th>
<th>Tibial component</th>
<th>Functional outcomes</th>
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Conclusions

The navigation system can provide

(compared with conventional technique)

- Good stability
- Improved alignment accuracy
- Better results in stiffness of knee