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Lumbar fusion

Presently, Mr V does not undertake these procedures

If clinically indicated, he refers patients on to colleagues who undertake these procedures with high frequency and with good results

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Basics

- Modern surgical techniques have:
  - Improved accuracy of screw placement
  - Reduced wound size
  - Reduced hospital length of stay
  - Allowed improved restoration of alignment

- However fusion:
  - Eliminates motion at the operated level
  - Does not offer any guarantee of significant pain reduction

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Volvo study

- "Volvo" study- 2001, Swedish Lumbar Spine study group
- N= 294, 19 centres
- 3 fusion methods, n=222
- Range of physiotherapy, n=72
- 2y fu – n=289, incl 25 cross over
- Back pain reduction (VAS) S-33%, C-7%,
  - max difference at 6m
- Back to work- S-36%, C-13%
- 17% early complication rate
- 7y outcome – unpublished – no difference

MRC Spine Stabilisation Trial

- Randomised controlled trial (ie Class I evidence)
- Surgical stabilization of the spine versus intensive rehabilitation programme (with cognitive behavioural therapy) for chronic low back pain
- 19 centres in UK
- Primary outcome measures –
  - Oswestry disability index and shuttle walking test
  - At baseline (at randomization) and at 2y.
- Surgery n=176, rehab n=173, 284 (81%) follow up data at 2y
- Both groups showed reduced disability at 2y (possibly unrelated to intervention) . No clear evidence that surgery was more beneficial

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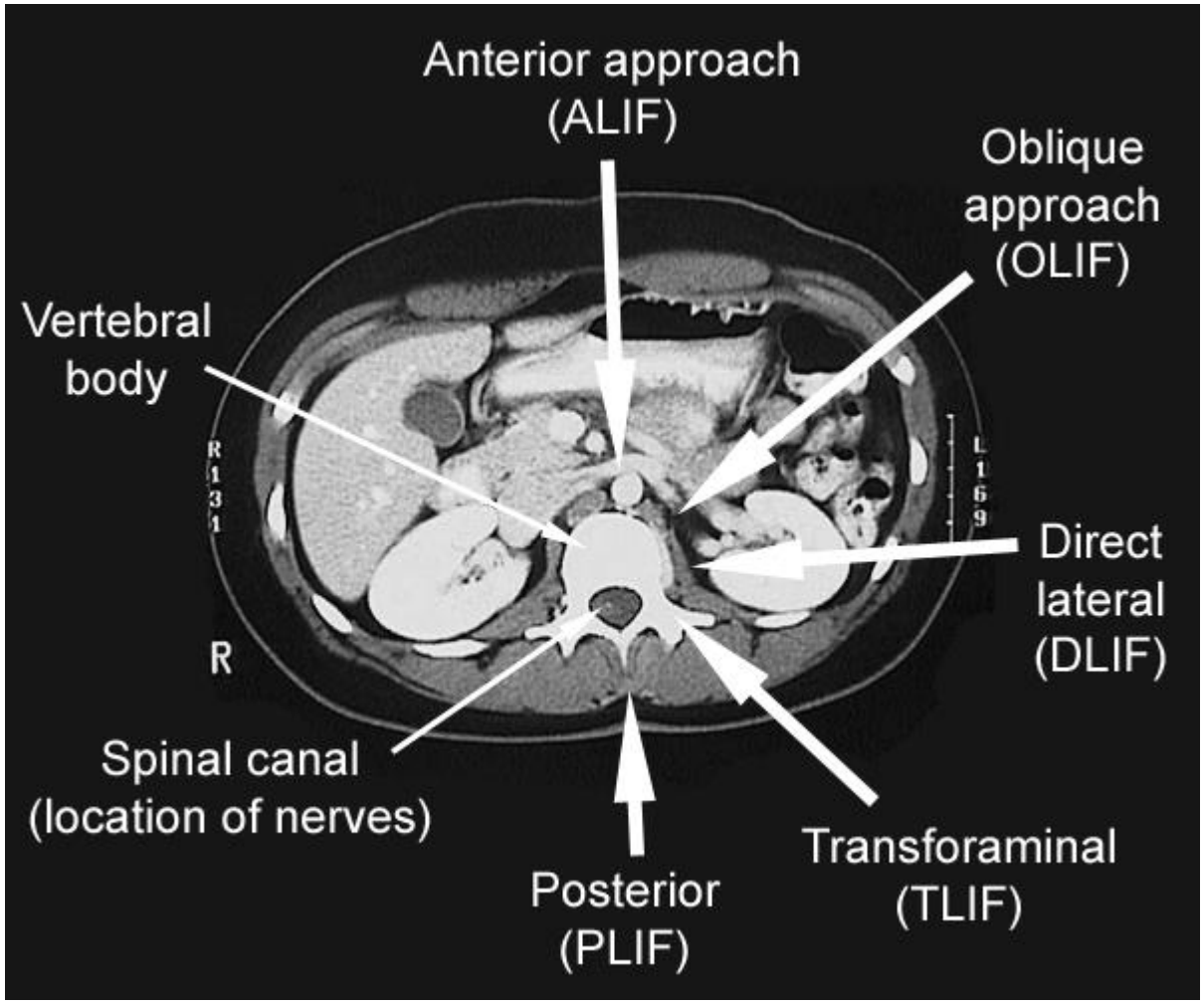
Approaches to lumbar fusion



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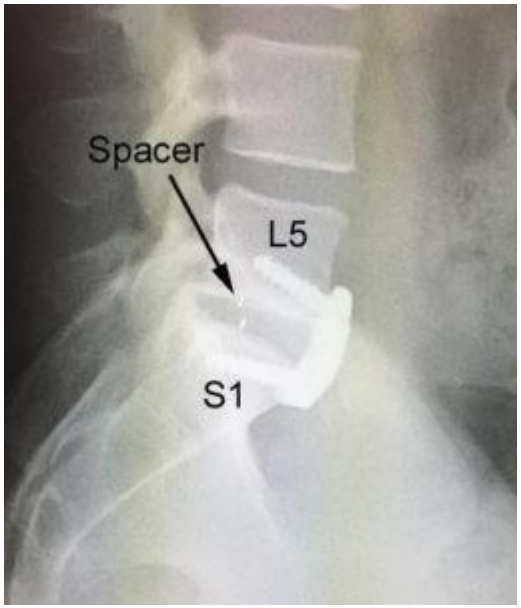
Examples of ALIF and posterior and lateral interbody cages



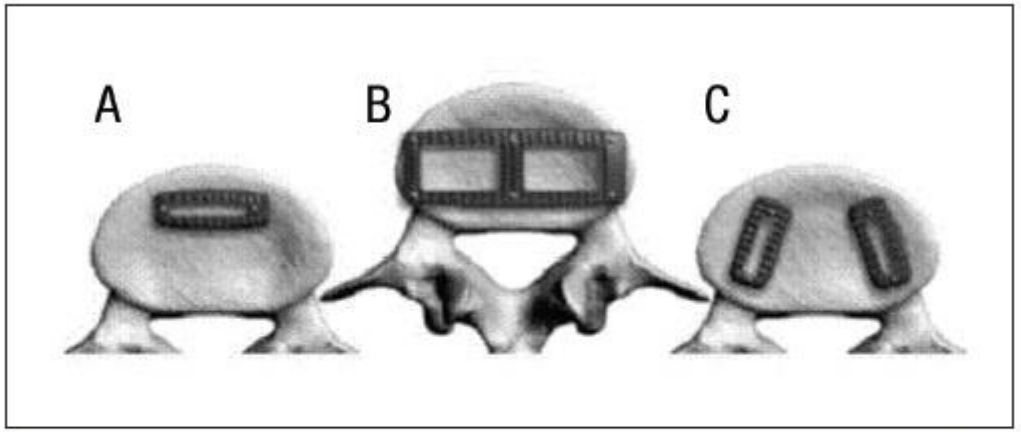


Figure 3. Comparative interbody cage sizes. A: TLIF (transforaminal lumbar interbody fusion); B: LLIF (lateral lumbar interbody fusion [XLIF, DLIF, etc]); C: PLIF (posterior lumbar interbody fusion). As you can see, the LLIF is considerably larger in size.