

A UK-based pilot study of current surgical practice and implant preferences in lumbar fusion surgery

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SECTION A: General information

1. Please, confirm your medical specialty

- Neurosurgery
- Orthopaedic surgery
- Other specialty: _____

2. How many years have you been a consultant?

- < 5
- 5-9
- 10-14
- 15-19
- 20 or more

Supplementary digital content
Survey questionnaire

SECTION B: Surgical procedures

3. How many lumbar spinal surgeries have you performed in the last year?

		0	1-10	11-50	51-100	>100
1.	Anterior (ALIF)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	Posterior (PLIF)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	Lateral (XLIF/DLIF)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	Transforaminal (TLIF)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	Total Disc replacement (TDR)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. To which extent do you agree or disagree with each of the following statement?

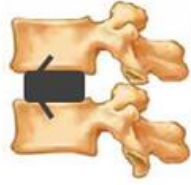
		STRONGLY AGREE	AGREE	NEITHER AGREE NOR DISAGREE	DISAGREE	STRONGLY DISAGREE
1.	The choice of the procedure (spinal fusion or disc replacement) is based on patient-specific evaluation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	The choice of the procedure (spinal fusion or disc replacement) is based on the spinal segment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	The fusion surgical approach (e.g. ALIF, PLIF or XLIF) is based on patient-specific evaluation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	The fusion surgical approach (e.g. ALIF, PLIF or XLIF) is based on the spinal segment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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5. Which type of fixation do you prefer for fusion surgery?



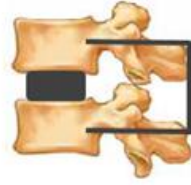
- Stand-alone



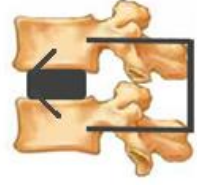
- With screws



- With plate



- With pedicle screws



- With both screws and pedicle screws

- Other: _____

Supplementary digital content
Survey questionnaire

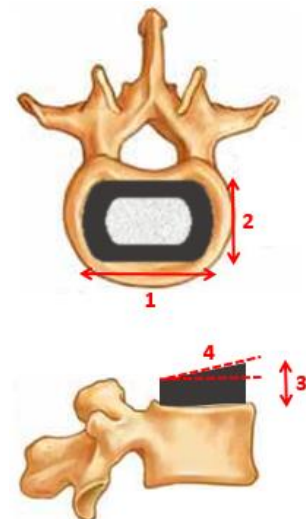
SECTION C: Implants

6. How important are the following factors in the choice of the right cage?

		VERY IMPORTANT	IMPORTANT	NOT TOO IMPORTANT	NOT AT ALL IMPORTANT	NO OPINION
1.	Manufacturer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	Price	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	Geometry (see below)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	Evidence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	Patients characteristics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. How important are geometrical parameters in the choice of a particular cage?

		VERY IMPORTANT	IMPORTANT	NOT TOO IMPORTANT	NOT AT ALL IMPORTANT	NO OPINION
1.	Endplate width	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	Endplate length	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	Thickness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	Lordotic angle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Supplementary digital content
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8. Is the lordotic angle of the fusion cage related to the lumbar segment?

(Please cross the more suitable cage lordotic angle for each spinal segment)



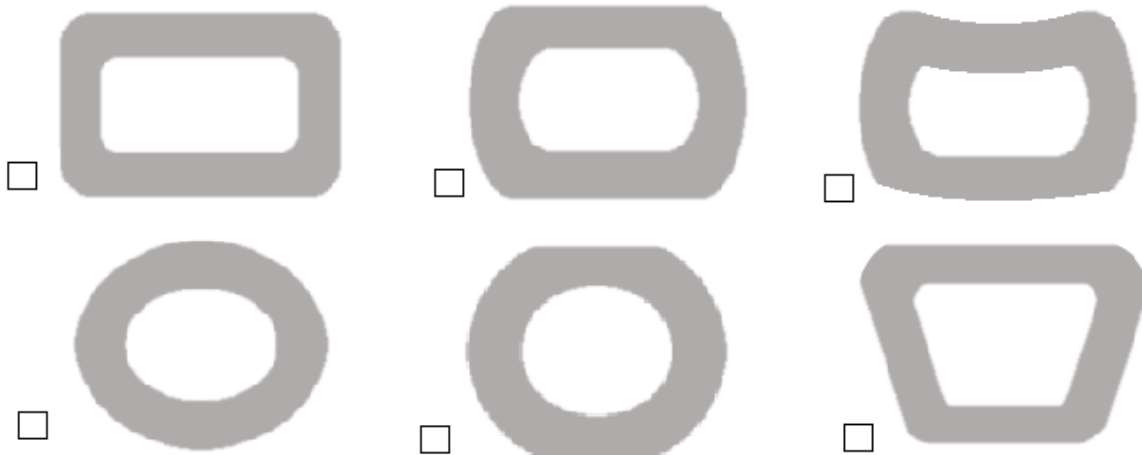
Segment	Cage Lordotic Angle			
	0°	5°	10°	15°
L1/L2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L2/L3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L3/L4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L4/L5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L5/S1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. Which material do you prefer for intervertebral fusion cages?

- Titanium
- Trabecular
- PEEK
- Tantalum
- Trabecular
- Other: _____

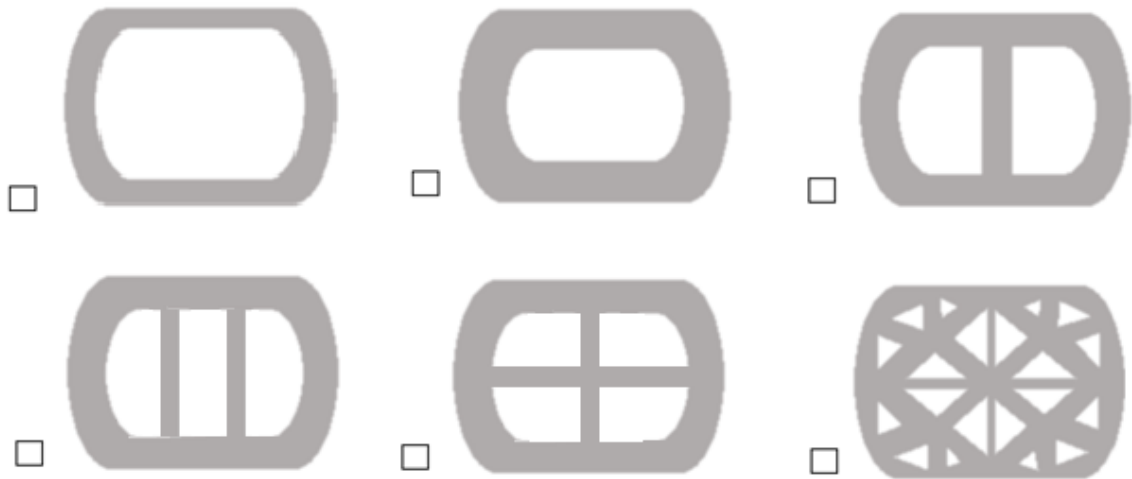
10. Which of the following design resembles your favorite device?

10.a (top view)



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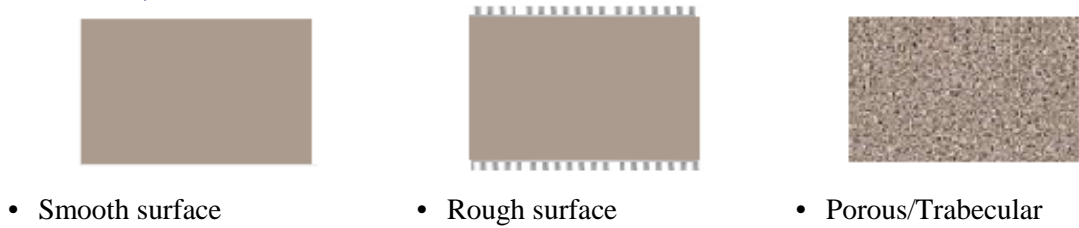
10.b (top view)



10.c (lateral view)



10.d (lateral view)



11. Which commercial cages do you use the most?

Supplementary digital content
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SECTION D: Bone graft materials

12. Which kind of bone graft do you prefer for fusion surgery?

- Autograft
- Allograft
- Synthetic
- Other: _____

13. Which kind of non-autograft bone graft do you prefer for fusion surgery?

- HA (Hydroxyapatite)
- Si-HA (Silicon Hydroxyapatite)
- HA/CC (Hydroxyapatite/Calcium Carbonate)
- Coralline Hydroxyapatite
- DBX, DBM (Demineralized Bone Matrix)
- Other: _____

14. Which form of bone graft do you prefer for fusion surgery?

- Paste
- Granules
- Cement
- Other: _____

15. Which commercial bone grafts do you use the most?
