Vertebral body replacement

Vertebral body replacement (VBR) using CFR PEEK cages represents a legitimate surgical strategy that opens a variety of improvements-especially in patients in need of postoperative radiotherapy of the spine and MRI-based follow-up examinations [1].

Design variations of expandable cages for vertebral body replacement do not show any significant effect on the biomechanical results. There was no significant difference found, between the biomechanical properties of expandable and non-expandable cages. After corporectomy, isolated implantation of expandable cages plus anterior plating was not able to restore normal stability of the motion segment. As a consequence, isolated anterior stabilization using cages plus LCDCP should not be used for vertebral body replacement in the thoraco-lumbar spine [2].

1)
Schwendner M, Ille S, Kirschke JS, Bernhardt D, Combs SE, Meyer B, Krieg SM. Clinical evaluation of vertebral body replacement of carbon fiber-reinforced polyetheretherketone in patients with tumor manifestation of the thoracic and lumbar spine. Acta Neurochir (Wien). 2023 Feb 23. doi: 10.1007/s00701-023-05502-z. Epub ahead of print. PMID: 36820888.
2)
Khodadadyan-Klostermann C, Schaefer J, Schleicher P, Pflugmacher R, Eindorf T, Haas NP, Kandziora F. [Expandable cages: biomechanical comparison of different cages for ventral spondylodesis in the thoracolumbar spine]. Chirurg. 2004 Jul;75(7):694-701. German. PubMed PMID: 15258751.