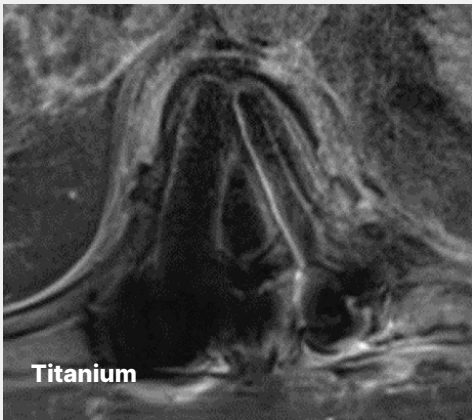
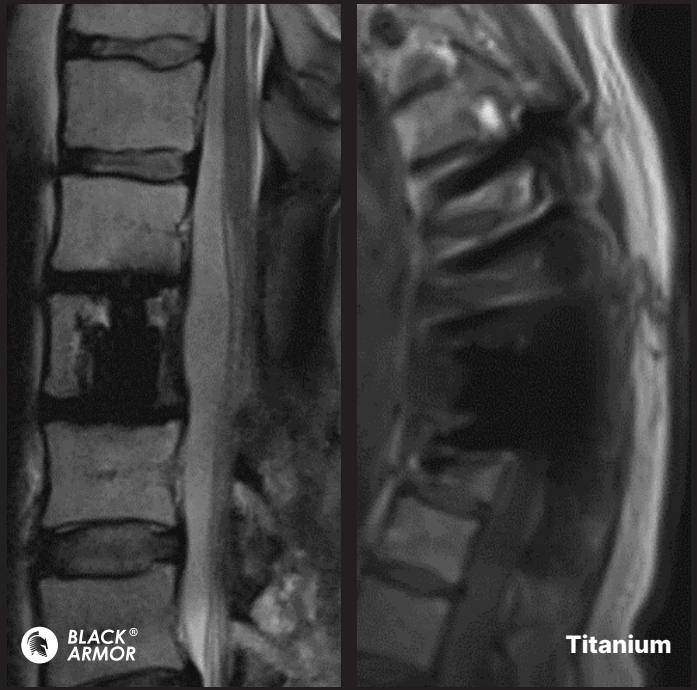
ENHANCED TREATMENT OPTIONS FOR SPINE TUMOR PATIENTS

See the Difference



Your Choice in Implant Materials Can Enable Therapy Options and Enhance the Patient-Care Experience



Improved local control through optimized radiation planning and delivery

Early recurrence detection with minimal patient burden

Reliable stabilization with decreased artifacts

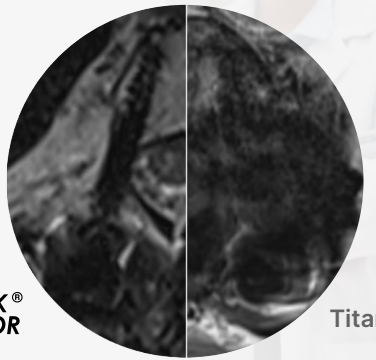
BLACK® ARMOR The material for implants.

Improve the Treatment of Spinal Neoplasms through Optimized Radiation Therapy

Implants made of BlackArmor® Carbon/PEEK can provide optimized adjuvant radiation therapy through artifact-reduced postoperative imaging and decreased beam scatter.

INCREASE LOCAL TUMOR CONTROL

With similar properties to native bone,[1] BlackArmor® ensures fast and accurate planning of radiation therapy, precise application and homogeneous distribution of the radiation dose in the target volume,[2-9] with the potential of better local control than traditional titanium implants.[10]



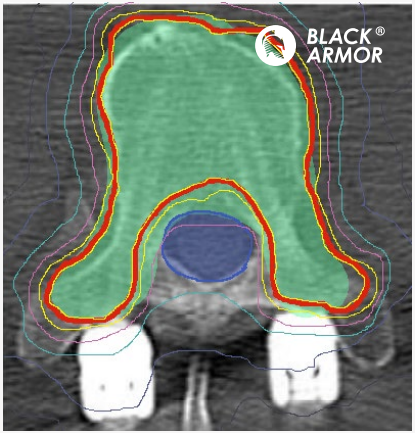
BLACK® ARMOR

Titanium

On which side can you more precisely delineate the anatomical structures for radiotherapy planning?

PROTECT THE ORGANS AT RISK

Tumors can be precisely and aggressively irradiated while sparing healthy tissue,[1,2,8,9] which may lead to reduced toxicity to the OARs and avoid adverse effects.



Accurate delineation of the spinal cord (blue) and the treatment area (green)

EXPAND YOUR PATIENTS' THERAPY OPTIONS WITHOUT ADDITIONAL IMAGING

BlackArmor® enables an unrestricted access to radiation modalities thus providing opportunities to treat neoplasms more aggressively with SBRT[6,11] and proton beam therapy.[1,3,9]

Additionally, due to reduced artifacts, MR and CT imaging are usually feasible for advanced planning, which can save patients time and unnecessary discomfort from more burdensome imaging modalities, like a CT myelogram, that are sometimes required with titanium implants.[12]

Optimize Follow-up for Early Intervention with Minimal Patient Burden

The life expectancy of cancer patients has increased significantly,[13] which is why long-term and reliable follow-up care has become so much more critical. BlackArmor® Carbon/PEEK implants enable long-term reliable tumor monitoring.

DETECT RECURRENCES NEAR THE IMPLANT AT AN EARLY STAGE

Catching reccurences early can lead to quicker interventions and can improve your patients' prognosis and quality of life while avoiding debilitating and costly emergency measures.

Recurrence detection 2 months postoperatively during regular follow-up.
When would this recurrence have been detected near a titanium implant?

DECREASE UNNECESSARY IMAGING AND EASE PATIENT BURDEN

Artifact-reduced postoperative imaging with BlackArmor® Carbon/PEEK implants[2,7,9,14] allows you to clearly assess spinal anatomy through traditional CT and MRI, potentially reducing the need for additional painful and costly modalities.

Easy assessment of a successful decompression. Would the same kind of reliable assessment also be possible with titanium implants?

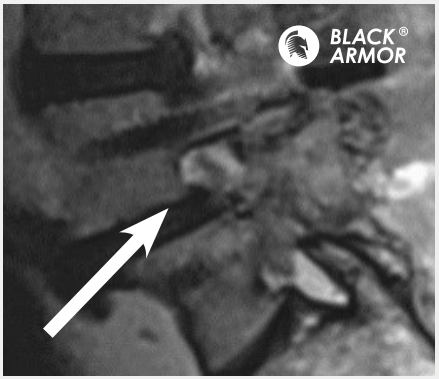
ENABLE ADDITIONAL REIRRADIATION OPPORTUNITIES

When recurrences occur, BlackArmor® allows for unrestricted reirradiation techniques for regaining local control.

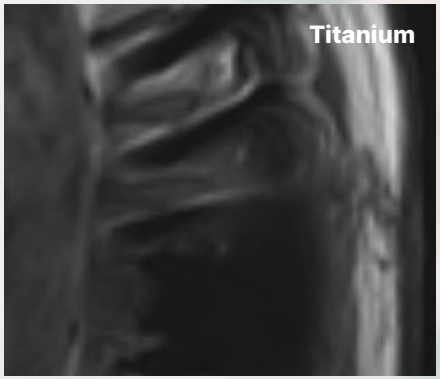
Support Your Patients' Recovery with Optimized Perioperative Management

EXPERIENCE THE ADVANTAGES OF ARTIFACT-REDUCED IMAGING WITH RELIABLE STABILITY AND A STANDARD SURGICAL TECHNIQUE

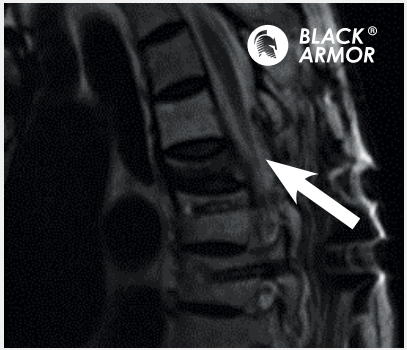
BlackArmor® Carbon/PEEK implants ensure safe osseointegration thanks to their Ti-iT® titanium coating,[15] reliable stabilization with a low complication profile[16] thanks to their titanium-like safety[17-20] and load-bearing profile[21] as well as state-of-the-art surgical techniques (minimally invasive, open, cement-augmented).



Thanks to artifact-free visualization of the neuroforamen, root compression can be reliably excluded.



Metallic artifacts don't allow adequate assessment of the neuroforamen.



No recurrence 6 months postoperatively after separation surgery and stereotactic irradiation

COMBINE MINIMALLY INVASIVE SEPARATION SURGERY WITH PRECISE RADIOTHERAPY

Unlike patients with titanium implants,[22-24] patients with BlackArmor® Carbon/PEEK implants are eligible for unrestricted stereotactic irradiation[6,11] after separation surgery.

MAKE MORE CONFIDENT DECISIONS WHEN FACED WITH NEW OR PERSISTENT POSTOPERATIVE SYMPTOMS

BlackArmor® Carbon/PEEK implants, unlike titanium implants, allow clear diagnoses or exclusions of perioperative complications[14] and can reduce non-indicated revision surgeries. Metal artifacts often prevent reliable assessment.[14,25,26]

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Contact in the USA:

icotec Medical, Inc.
125 High Street
Suite 220
Boston, MA 02110
United States
Phone: (860) 404-6999
info@icotec-medical.com
www.icotec-medical.com

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