

# Musculoskeletal Interventional Oncologic Interventions:

## Year in Review

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# Disclosures

Speakers' Bureau:

- Medtronic
- Endocare

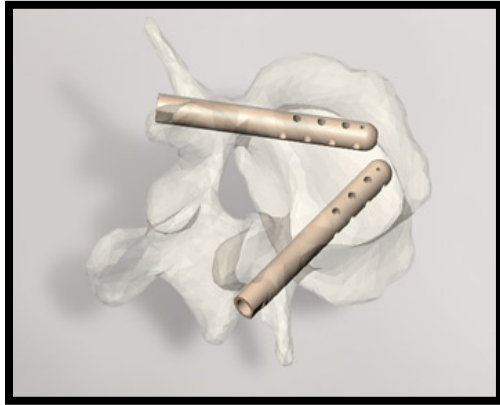
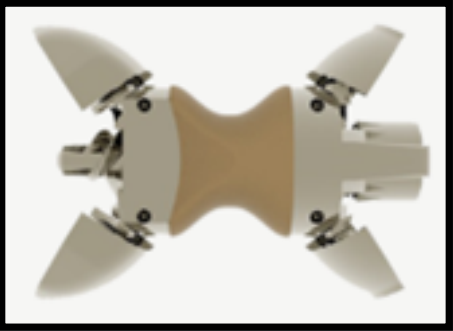
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## The 2020 Global Work Year in Review

# MSK IO Year in Review

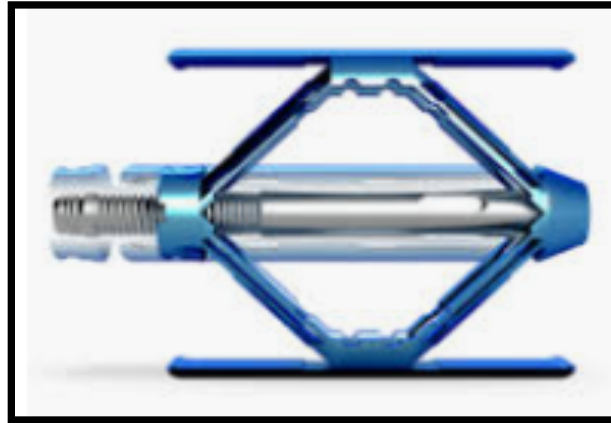


Review | Published: 15 August 2020

## Vertebral augmentation with spinal implants: third-generation vertebroplasty

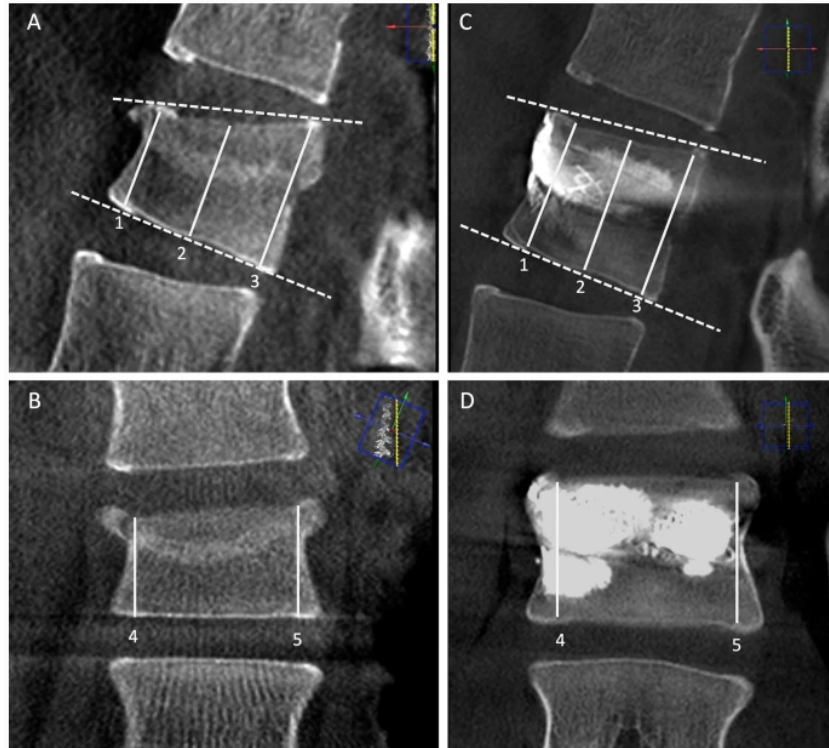
[Danielle Manz](#), [Mark Georgy](#), [Douglas P. Beall](#), [Gamal Baroud](#), [Bassem A. Georgy](#) ✉ & [Mario Muto](#)

[Neuroradiology](#) (2020) | [Cite this article](#)




Renewed interest in vertebral implants

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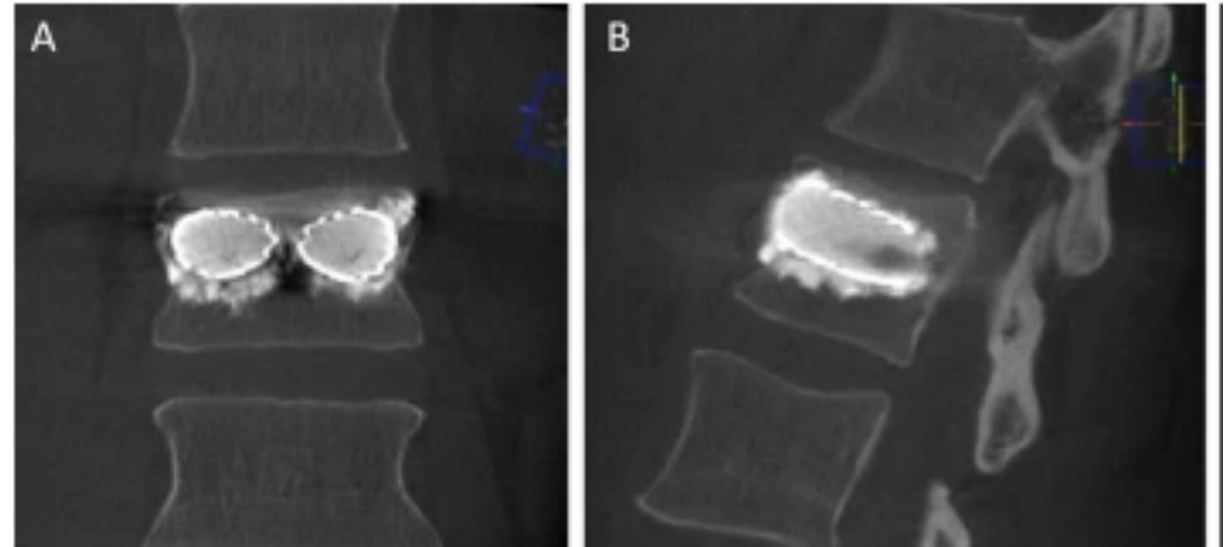


Clinical Investigation | Published: 14 June 2019

## Efficacy of the Vertebral Body Stenting System for the Restoration of Vertebral Height in Acute Traumatic Compression Fractures in a Non-osteoporotic Population

[Julien Garnon](#) , [Benjamin Doré](#), [Pierre Auloge](#), [Jean Caudrelier](#), [Danoob Dalili](#), [Nitin Ramamurthy](#), [Guillaume Koch](#), [Roberto Luigi Cazzato](#) & [Afshin Gangi](#)

*CardioVascular and Interventional Radiology* **42**, 1579–1587(2019) | [Cite this article](#)



The re-examination of vertebral stenting for traumatic non-osteoporotic fractures

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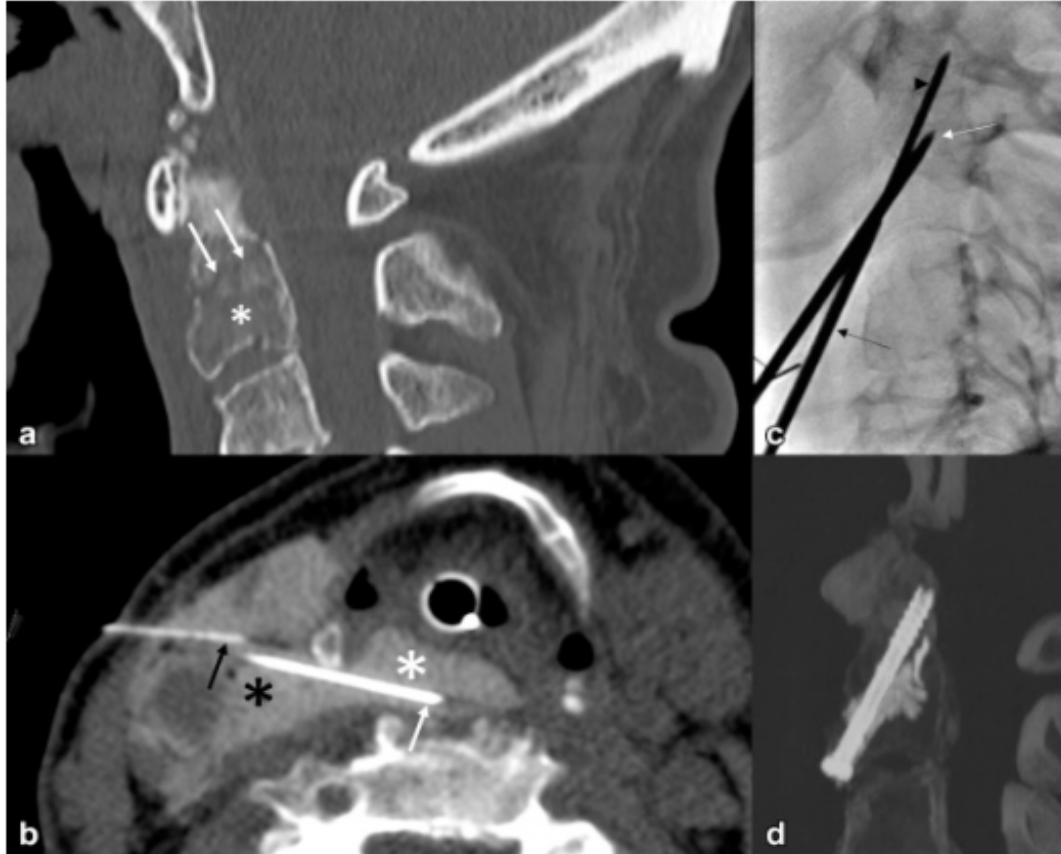
Observational Study > Eur Radiol. 2020 Mar;30(3):1571-1583. doi: 10.1007/s00330-019-06525-w.  
Epub 2019 Nov 20.

## Safety and effectiveness of cervical vertebroplasty: report of a large cohort and systematic review

Frédéric Clarençon<sup>1 2</sup>, Robert Fahed<sup>3</sup>, Evelyne Cormier<sup>4</sup>, Idriss Haffaf<sup>4</sup>, Jean-Philippe Spano<sup>5 6</sup>,  
Eimad Shotar<sup>4 5</sup>, Kévin Premat<sup>4 5</sup>, Raphael Bonaccorsi<sup>7</sup>, Vincent Degos<sup>5 8</sup>, Jacques Chiras<sup>4 5</sup>

Safety of cervical vertebroplasty: 140 patients

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## Case Reports

➤ [J Vasc Interv Radiol. 2019 Oct;30\(10\):1667-1669.](#)  
doi: 10.1016/j.jvir.2019.05.003. Epub 2019 Aug 22.

## Combined Percutaneous Screw Fixation and Cementoplasty of the Odontoid Process

Julien Garnon<sup>1</sup>, Pierre Auloge<sup>1</sup>, Danoob Dalili<sup>2</sup>, Guillaume Koch<sup>1</sup>, Roberto Luigi Cazzato<sup>1</sup>, Afshin Gangi<sup>1</sup>

Adventures in odontoid fixation

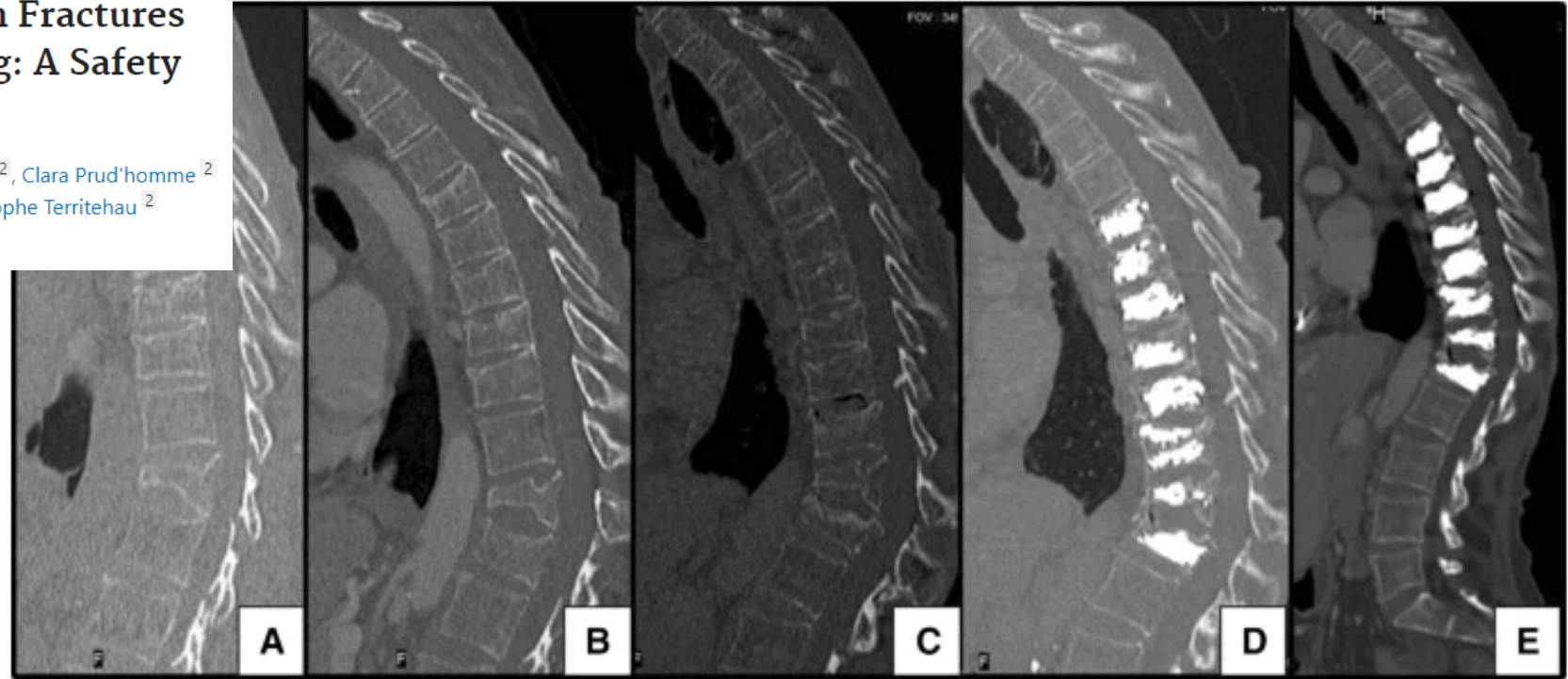


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► [Cardiovasc Intervent Radiol. 2020 Jul;43\(7\):1041-1048. doi: 10.1007/s00270-020-02480-y.](#)  
Epub 2020 May 7.

## Multi-Level Vertebroplasty for 6 or More Painful Osteoporotic Vertebral Body Compression Fractures Performed in the Same Procedural Setting: A Safety and Efficacy Report in Cancer Patients

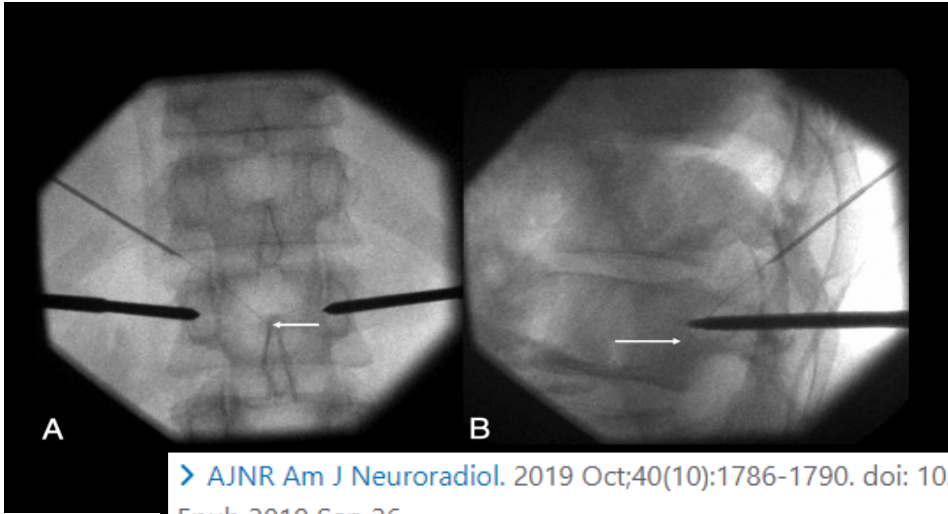
Benjamin Moulin <sup>1</sup>, Alexandre Delpla <sup>2</sup>, Lambros Tselikas <sup>2 3</sup>, Marc Al Ahmar <sup>2</sup>, Clara Prud'homme <sup>2</sup>, Charles Roux <sup>2</sup>, Steven Yevich <sup>2</sup>, Sophie Laurent <sup>4</sup>, Antoine Hakime <sup>2</sup>, Christophe Territehau <sup>2</sup>, Guillaume Gravel <sup>2</sup>, Thierry De Baere <sup>2 3</sup>, Frédéric Deschamps <sup>2 3</sup>



Multilevel vertebral augmentations with safety publication



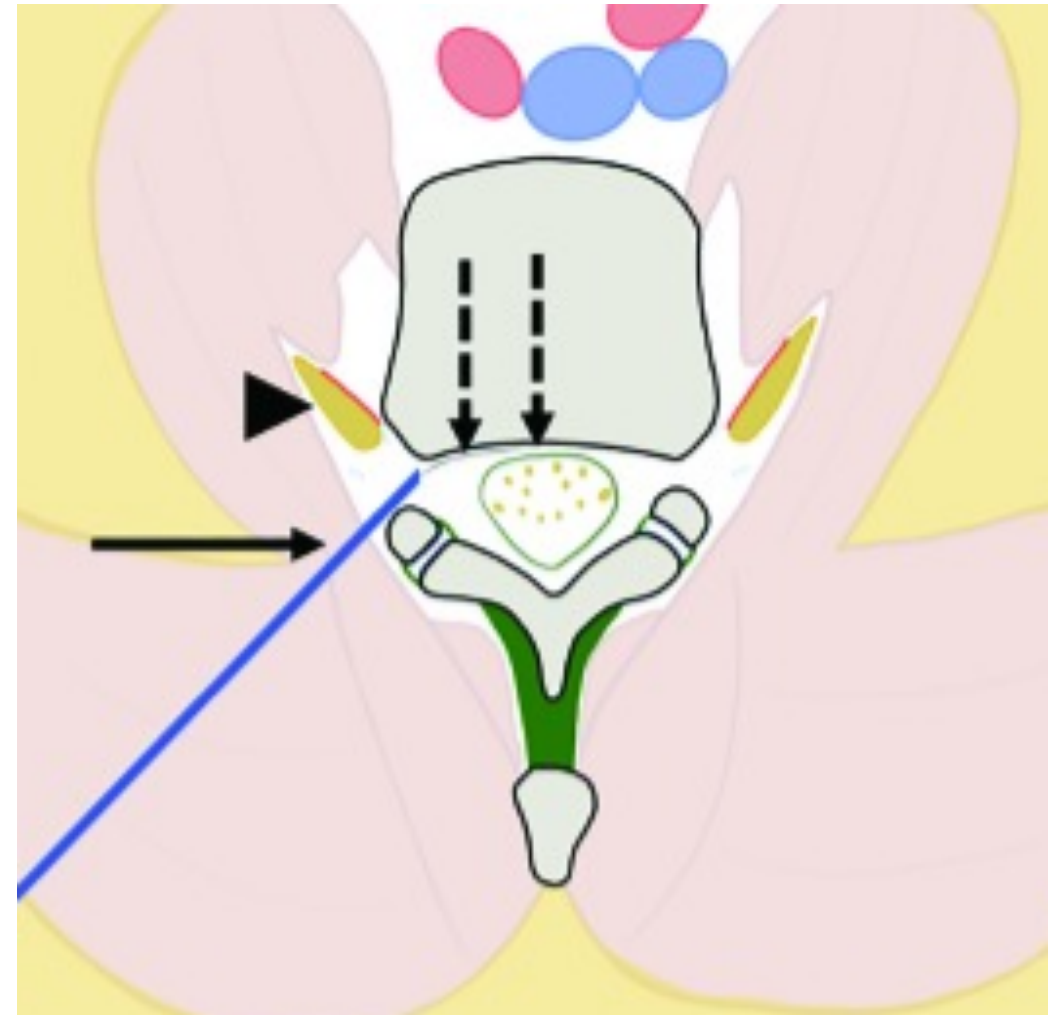
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► [AJNR Am J Neuroradiol. 2019 Oct;40\(10\):1786-1790. doi: 10.3174/ajnr.A6233. Epub 2019 Sep 26.](#)

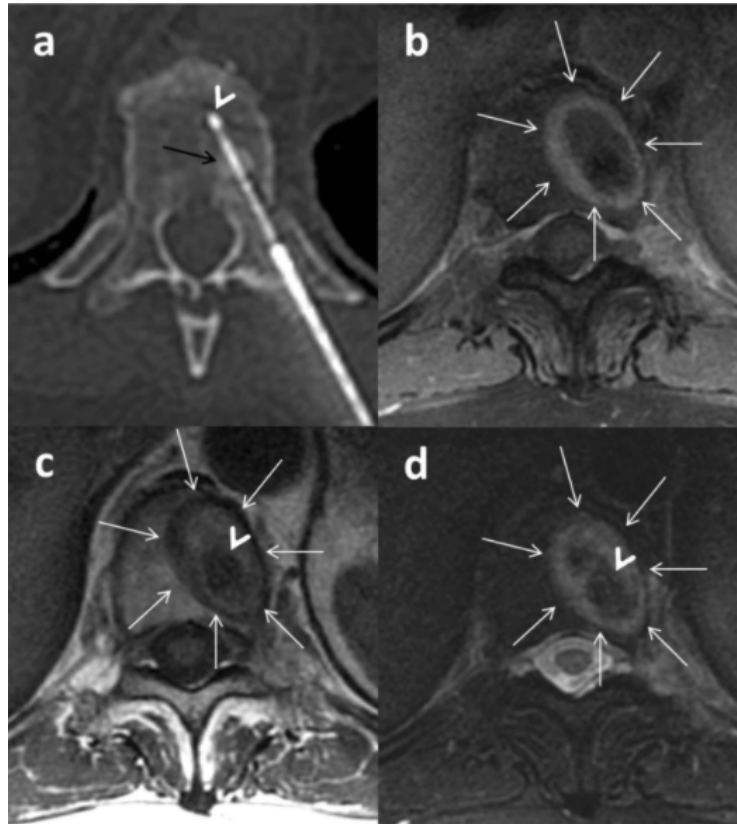
**Transforaminal Insertion of a Thermocouple on the Posterior Vertebral Wall Combined with Hydrodissection during Lumbar Spinal Radiofrequency Ablation**

R Lecigne <sup>1</sup>, J Garnon <sup>2</sup>, R L Cazzato <sup>2</sup>, P Auloge <sup>2</sup>, D Dalili <sup>3</sup>, G Koch <sup>2</sup>, A Gangi <sup>2</sup>



Description of thermocouple placement for accurate monitoring of posterior vertebral wall during RFA

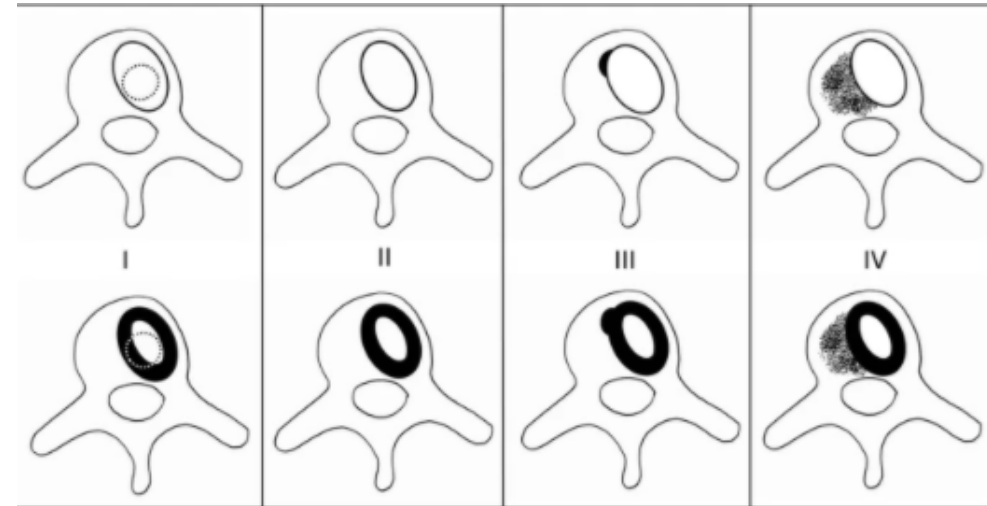
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> [Eur Radiol.](#) 2019 Oct;29(10):5655-5663. doi: 10.1007/s00330-019-06040-y. Epub 2019 Mar 15.

## Early detection with MRI of incomplete treatment of spine metastases after percutaneous cryoablation

Guillaume Gravel <sup>1</sup>, Lambros Tselikas <sup>2</sup>, Benjamin Moulin <sup>2</sup>, Steven Yevich <sup>2</sup>, Eric Baudin <sup>3</sup>, Antoine Hakime <sup>2</sup>, Salma Moalla <sup>2 4</sup>, Fadila Mihoubi <sup>4</sup>, Corinne Balleyguier <sup>4</sup>, Thierry de Baere <sup>2</sup>, Frederic Deschamps <sup>2</sup>



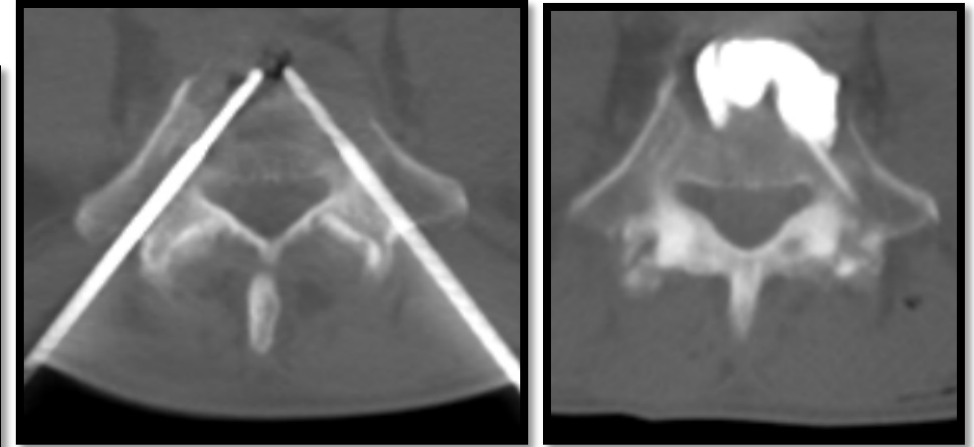
MRI obtained 1 month after cryoablation of spine lesions is useful to evaluate for local control efficacy

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> [Skeletal Radiol.](#) 2020 Jun 6. doi: 10.1007/s00256-020-03473-1. Online ahead of print.

**Comparison of post-operative pain scores and opioid use between kyphoplasty and radiofrequency ablation (RFA) systems combined with cement augmentation**

Sumit Jain <sup>1</sup>, Logan Kinch <sup>2</sup> <sup>3</sup>, Maunak Rana <sup>2</sup>, Magdalena Anitescu <sup>2</sup>



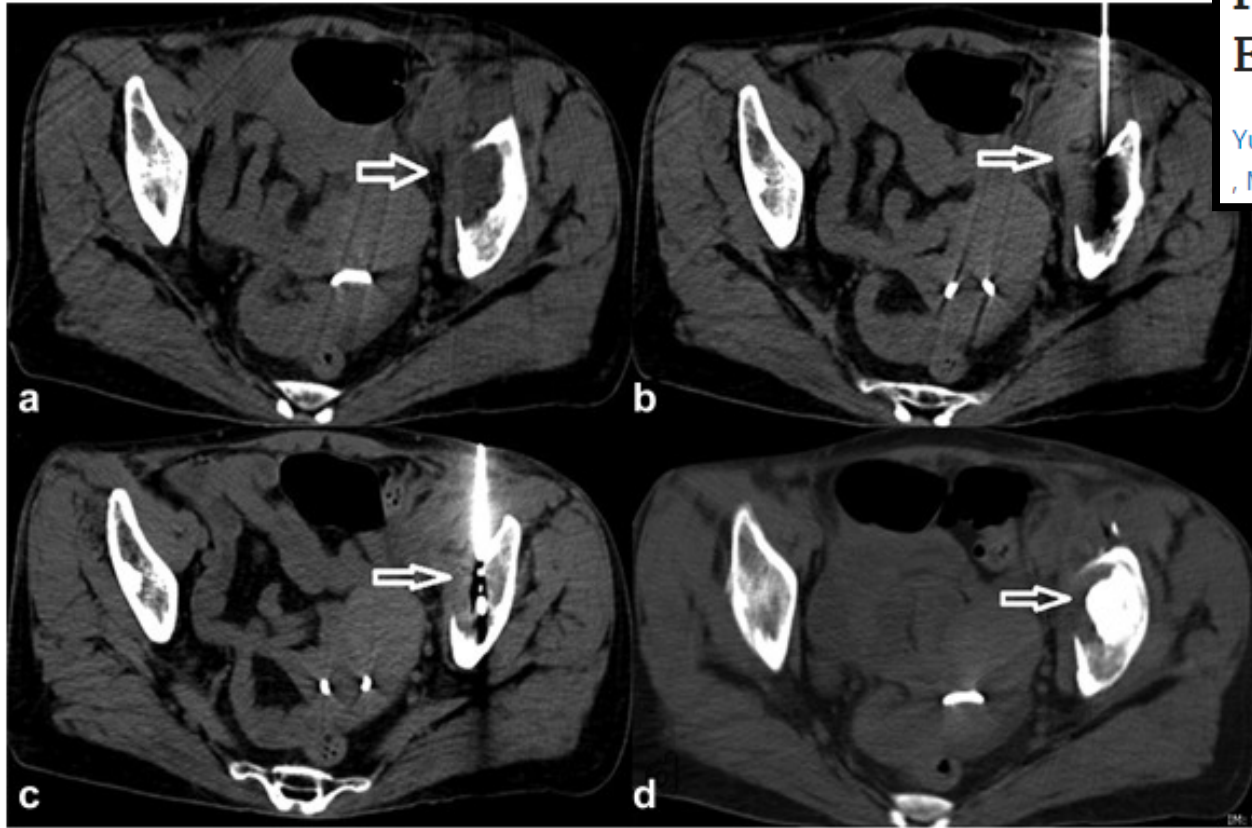
> [Pain Physician.](#) 2019 Sep;22(5):E441-E449.

**Spinal Radiofrequency Ablation Combined with Cement Augmentation for Painful Spinal Vertebral Metastasis: A Single-Center Prospective Study**

Dawood Sayed <sup>1</sup>, Daniel Jacobs <sup>2</sup>, Timothy Sowder <sup>2</sup>, Daniel Haines <sup>2</sup>, Walter Orr <sup>1</sup>

Acceptance of the application for ablation + vertebral augmentation for pathologic vertebral compression fractures and initial comparisons to augmentation alone (TBD).

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> J Vasc Interv Radiol. 2019 Dec;30(12):1934-1940. doi: 10.1016/j.jvir.2019.08.008. Epub 2019 Oct 24.

## Combination of Microwave Ablation and Percutaneous Osteoplasty for Treatment of Painful Extraspinal Bone Metastasis

Yuan-Yuan Qiu<sup>1</sup>, Kai-Xian Zhang<sup>2</sup>, Xin Ye<sup>3</sup>, Xu-Sheng Zhang<sup>1</sup>, Chao Xing<sup>1</sup>, Qing-Song Wu<sup>4</sup>, Miao-Miao Hu<sup>1</sup>, Peng-Xin Li<sup>5</sup>, Jun-Jie Wang<sup>6</sup>


Continued publications supporting combination ablation + cementoplasty outside of the spine



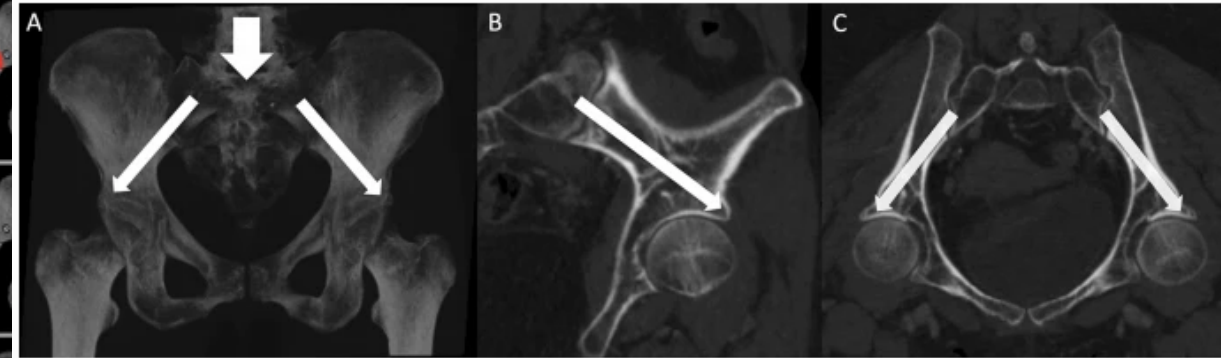
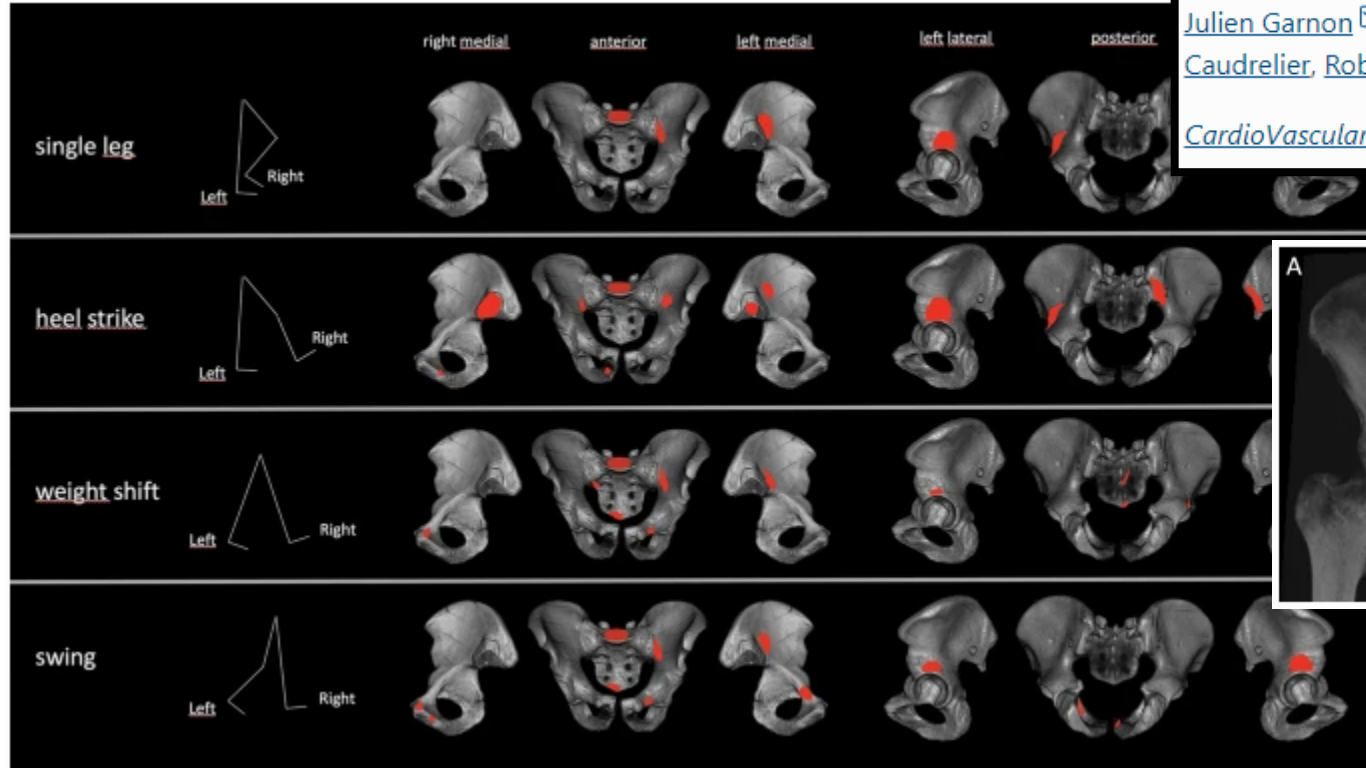
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Review | Published: 26 August 2020

## Biomechanics of the Osseous Pelvis and Its Implication for Consolidative Treatments in Interventional Oncology

[Julien Garnon](#) , [Jack W. Jennings](#), [Laurence Meylheuc](#), [Pierre Auloge](#), [Julia Weiss](#), [Guillaume Koch](#), [Jean Caudrelier](#), [Roberto Luigi Cazzato](#), [Bernard Bayle](#) & [Afshin Gangi](#)

*CardioVascular and Interventional Radiology* (2020) | [Cite this article](#)



Biomechanics of pelvis explained for approach to consolidative treatments

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> [Am J Hosp Palliat Care. 2020 Aug;37\(8\):619-623. doi: 10.1177/1049909119892003.](#)

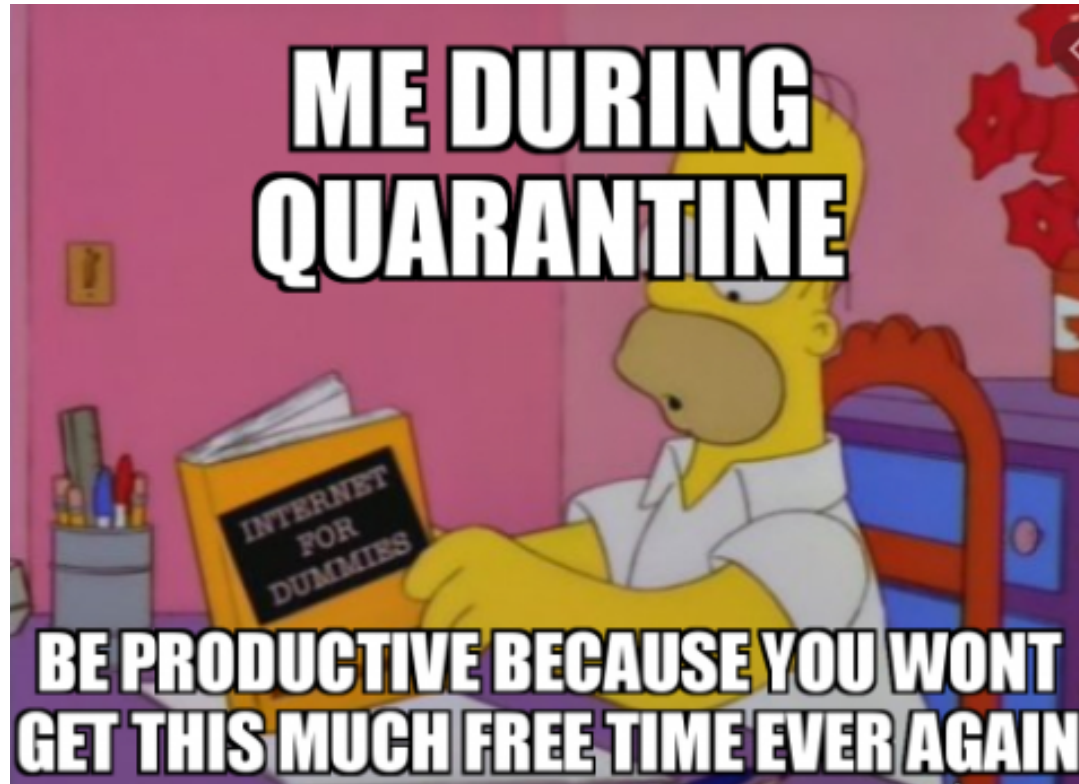
## Percutaneous CT-Guided Cryoablation of the Bilateral Pudendal Nerves for Palliation of Intractable Pain Related to Pelvic Neoplasms

John David Prologo <sup>1</sup>, Sivasai Manyapu <sup>2</sup>, Zachary L Bercu <sup>1</sup>, Ashmit Mittal <sup>3</sup>, Jason W Mitchell <sup>1</sup>

Cryoneurolysis as a long-lasting treatment for nerve pain



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Stay tuned, as many new technologies are advancing, existing technologies are improving, and validation studies are around the corner...