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The Role of the Advanced Practitioner in Managing Painful Bone Metastases With RFA

Medtronic | JADPRO

Objectives

- Understand radiofrequency ablation (RFA) as it relates to a pain management
- Review case studies to learn how OsteoCool RFA can result in significant and sustained palliative pain relief for patients with bone metastasis

What Is RFA?



- OsteoCool has internal cooling
 - Prevents charring at probe tip
 - Enables larger area of ablation

Case Study 1: Teresa

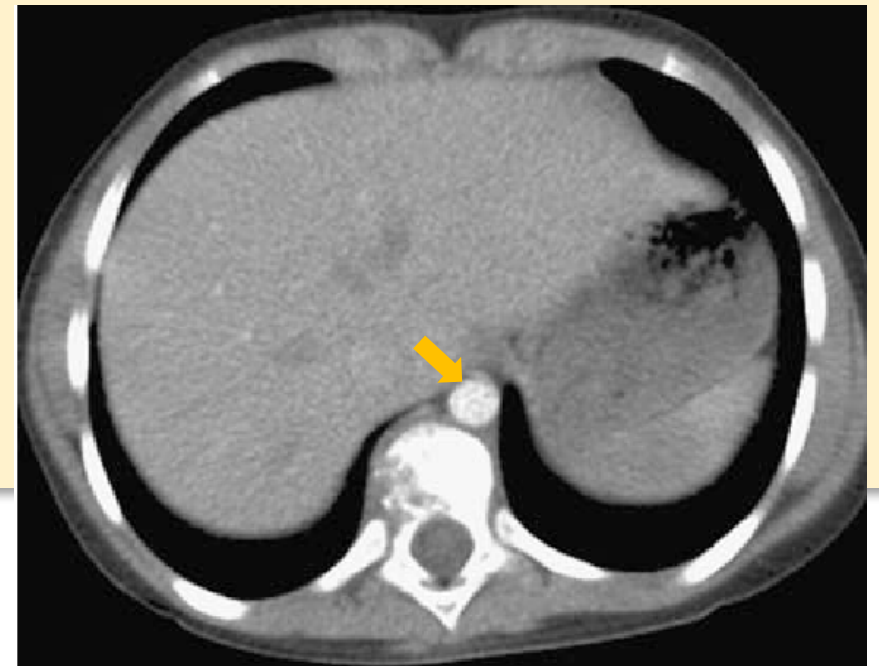
- 54-yr-old woman
- 2018: Diagnosed with stage II breast cancer
 - ER positive, PR positive
 - HER2 negative
- Relapsed 1 year later
 - 2-cm pulmonary lesion
- Treatment
 - 3 courses of chemotherapy
 - Taking fulvestrant for hormonal therapy

Case Study 1: New Onset of Back Pain

- Teresa presents with new-onset back pain

Pain Assessment

- Location: mid-to-low back
- Intensity: 8 / 10
- Quality: aching, stabbing
- Temporal factors: increased with movement or activity
- Tearful, as she cannot hold her new grandchild



- Analgesics ordered:
 - Oxycodone IR 5-10 mg q4h prn
 - Acetaminophen 650 mg tid

IR, immediate release; PRN, as needed; TID, three times daily

Which of the following approaches would you consider to help reduce Teresa's need for opioids?

- A. Radiation therapy (RT)
- B. RFA
- C. Recommend combination of ibuprofen and acetaminophen
- D. Recommend alternative therapy, such as acupuncture
- E. Unsure

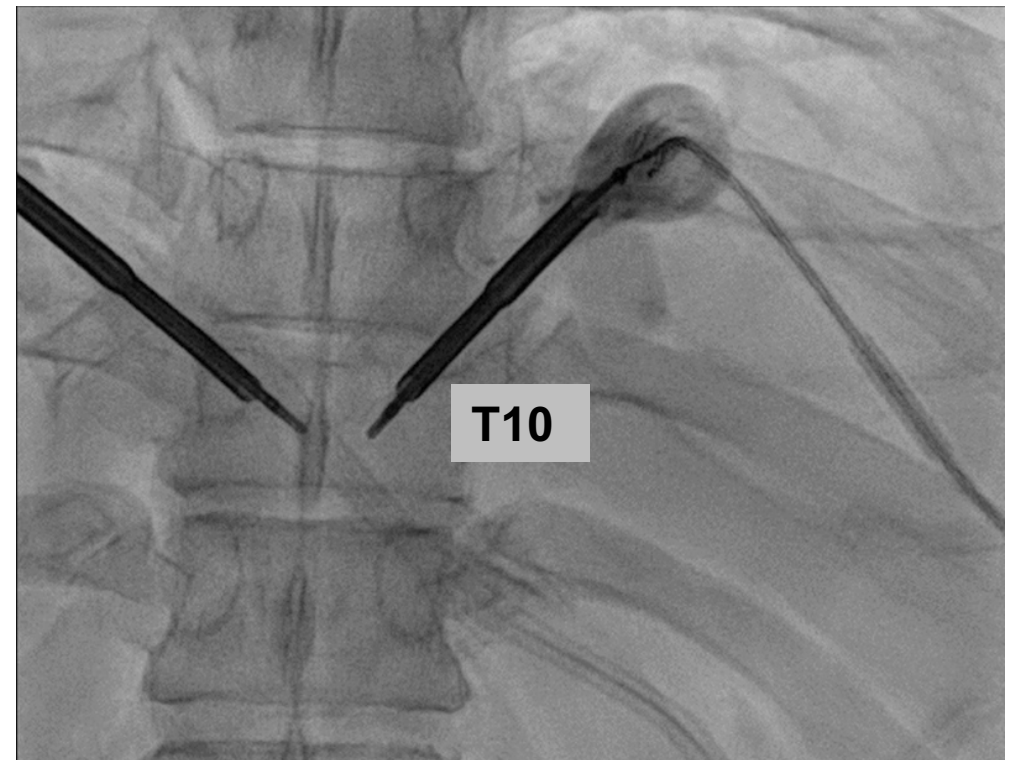
Which of the following approaches would you consider to help reduce Teresa's need for opioids?

- A. Radiation therapy (RT) 37%
- B. RFA 33%
- C. Recommend combination of ibuprofen and acetaminophen 27%
- D. Recommend alternative therapy, such as acupuncture 0%
- E. Unsure 3%

Case Study 1: OsteoCool Recommended

- Teresa checks in at the interventional radiology clinic 1 week later
- Procedure takes <10 min
- Discharged home after a total time of 3.5 h at the center

RFA Procedure Using 2 Probes



Case Study 1: OsteoCool Resulted in Swift Pain Reduction

Before

Pain: 4/10, 8/10 with
movement
50 mg oxycodone/d

Pain: 4/10
40 mg oxycodone/d

Pain: 3/10
10-15 mg oxycodone/d

**1-week
follow-up**

24 h After

- OsteoCool resulted in swift pain reduction, improved functioning, and decreased opioid requirements



Case Study 2: Edward

- 65-yr-old man diagnosed with stage IV NSCLC
 - Right lower lobe lesion
 - ALK-positive
 - Treated with surgery, radiation therapy, and chemotherapy
- History of alcohol and substance use disorder
 - Sober approximately 20 y
 - Fears relapse
- Development of brain metastases 2 y later
 - Treated with RT and ALK inhibitor



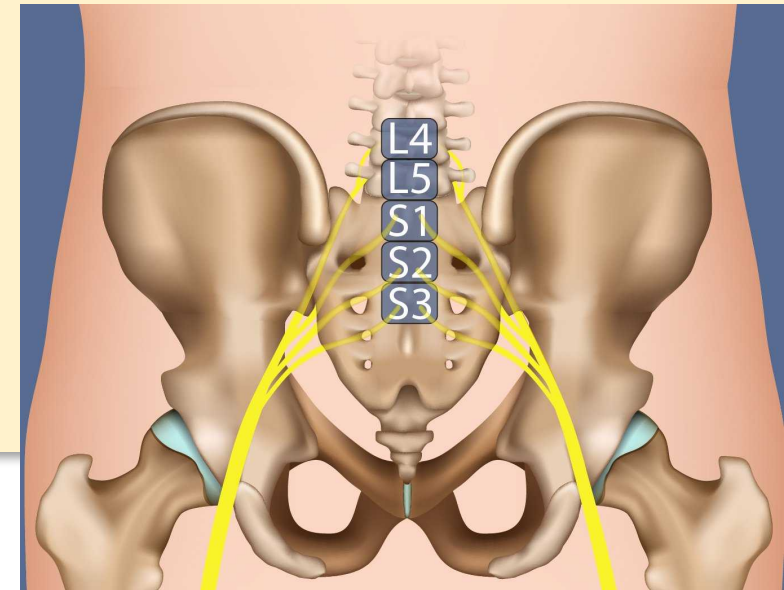
Case Study 2: New Onset of Back Pain

- Edward presents with new-onset back pain

Pain Assessment

- Location: right hip and buttock
- Intensity: 8/10
- Quality: aching, sharp, radiating down right buttock and crossing to front of thigh
- Temporality: increases with sitting
- Difficulty sleeping

- Analgesics ordered:
 - Morphine sulfate 5 -10 mg q3h prn
 - Edward reluctantly accepts



What is a major challenge you frequently encounter when managing pain in patients with substance use disorders?

- A. Choosing a therapy that will provide adequate relief without addiction potential
- B. Keeping up with non-pharmacologic pain management options for patients
- C. Getting patients to be seen in the interventional or radiation clinic in a timely manner
- D. Addressing patient and caregiver concerns
- E. All of the above

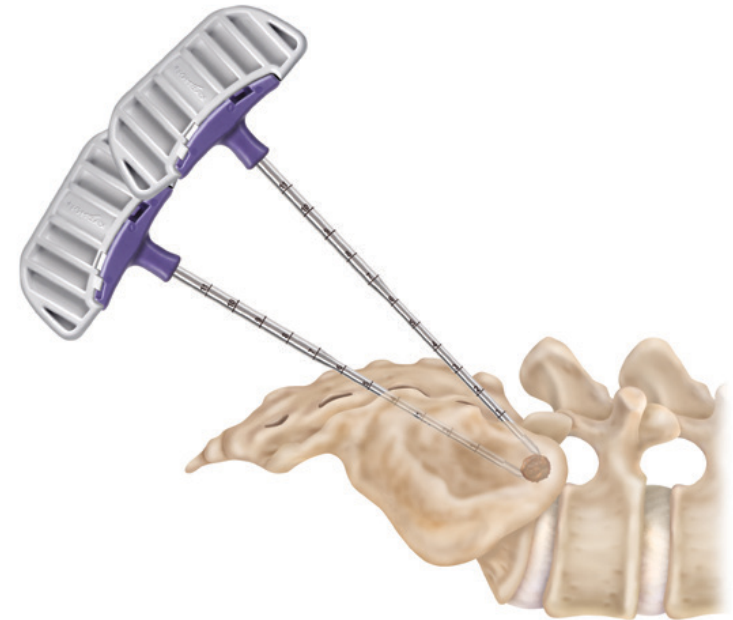
What is a major challenge you frequently encounter when managing pain in patients with substance use disorders?

- A. Choosing a therapy that will provide adequate relief without addiction potential 14%
- B. Keeping up with non-pharmacologic pain management options for patients 7%
- C. Getting patients to be seen in the interventional or radiation clinic in a timely manner 7%
- D. Addressing patient and caregiver concerns 0%
- E. All of the above 71%

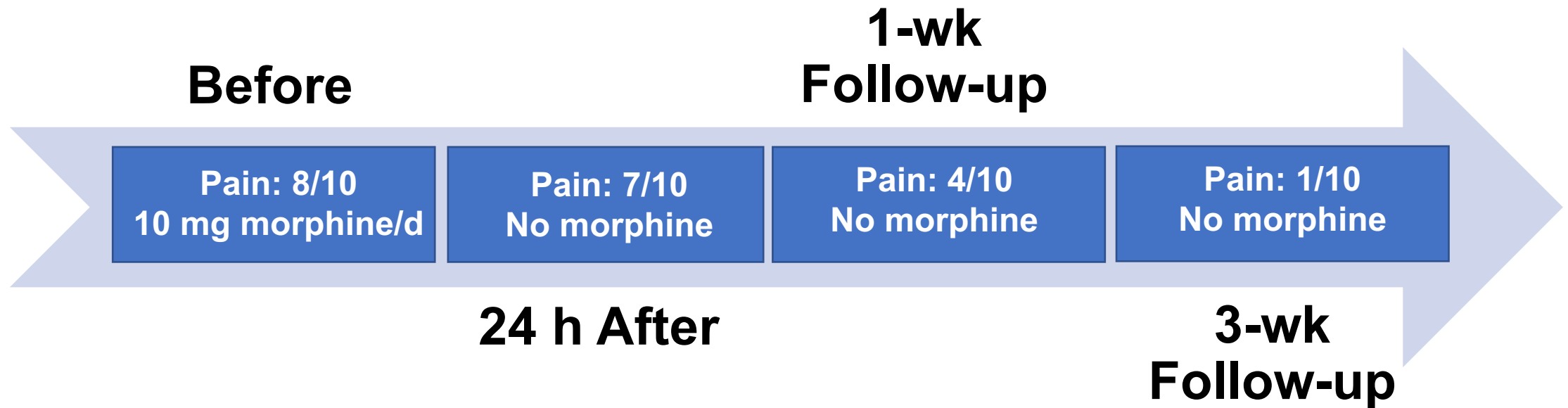
Case Study 2: OsteoCool Recommended

- Edward checks in at the interventional pain clinic 10 d later
- Procedure takes <20 min
- Discharged home after a total time of 6 h at the center
 - Some sedation
 - History of obstructive sleep apnea

RFA Procedure Using 2 Probes



Case Study 2: Significant Reduction in Pain



- OsteoCool resulted in significant pain reduction and decreased opioid requirements

Case Study 3: James

- 72-y-old man
- Divorced, active, enjoys golf
- Diagnosed with stage II rectal cancer
 - Surgery
 - Adjuvant RT and chemotherapy
- Relapse 3 y ago
 - Liver lesion that was resected
- Ongoing rectal and abdominal pain
 - Oxycodone CR 10 mg Q 12 h
 - Oxycodone IR 5 mg Q 4 h PRN



Case Study 3: New Onset of Back Pain

- James presents with new-onset back pain
- Tried to *tough it out*

Pain Assessment

- Location – lower center of back
 - Intensity – 9 intensity
 - Quality – aching, well-localized
 - Temporality – increases to 10 with golfing or coughing
 - Cannot play golf, but tried to “tough it out”
- Analgesics ordered:
 - Oxycodone CR increased to 20 mg Q 12 h
 - Oxycodone IR increased to 10 mg Q 4 h PRN

What diagnostic tests do you consider when determining the etiology of low-back pain?

- A. Almost always start with an x-ray
- B. I find CT scans are generally the most effective
- C. I order a PET/CT scan to evaluate pain when I can get insurance to pay for the exam
- D. I prefer to order an MRI scan as it gives the most detailed information

What diagnostic tests do you consider when determining the etiology of low-back pain?

- A. Almost always start with an x-ray 14%
- B. I find CT scans are generally the most effective 14%
- C. I order a PET/CT scan to evaluate pain when I can get insurance to pay for the exam 14%
- D. I prefer to order an MRI scan as it gives the most detailed information 57%

Case Study 3: OsteoCool Recommended

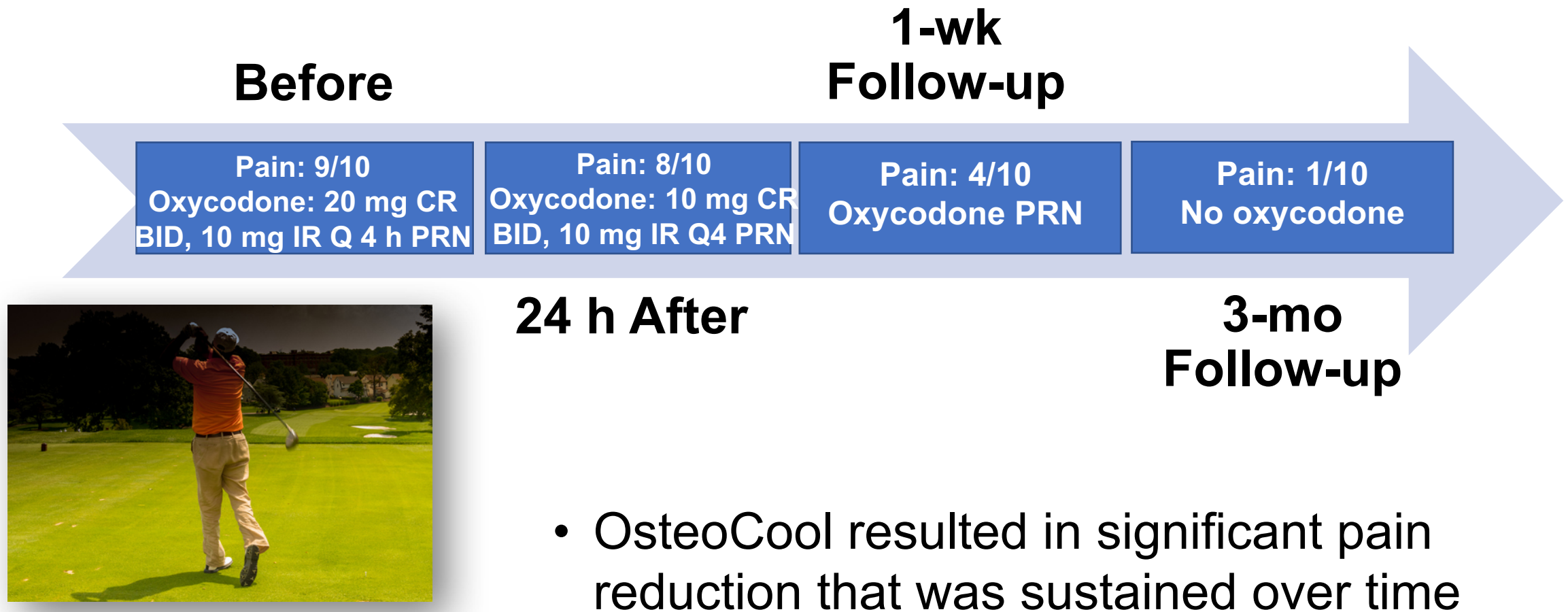
RFA Procedure Using 1 Probe¹

- James checks into the outpatient surgery and procedure center 1 wk later
- Procedure takes <10 min
- Discharged home after a total time of 5 h at the center
 - No complications



1. Saravana-Bawan S et al. *Ann Palliat Med*. 2019;8:168-177.

Case Study 3: Sustained Pain Reduction



Conclusions

- **RFA can result in:**

- Significant reduction in pain
- A decrease in opioid requirements
- Sustained pain relief over time
- Overall improvement in function and quality of life

- **AP Role:**

- ✓ Referring appropriate patients for RFA procedure
- ✓ Managing patients post-procedurally
- ✓ Titrating pain medications as appropriate
- ✓ Educating patients and providers regarding this treatment modality

Q & A

Please type your questions for Dr. Brant into the **question box** in the control panel.

THANK YOU!

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