Sodium Fluorescein for Spinal Lesions

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*No Disclosures or conflicts of interest
Fluorescein Sodium:

- FDA for use in vascular surgery and ophthalmology
- Within 7-14 seconds, will appear in the central retinal artery and brain
- Renal Clearance: 1.75 mL/min/Kg
- Hepatic Clearance: 1.5 mL/min/Kg
- Metabolized to Fluorescein monoglucuronide (80%) at one hour
- Systemic Clearance in 48-78 hours
Intraoperative sodium fluorescein for resection of spinal cord lesions

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Case 1:

Presentation: A 29 year-old female patient without significant past medical history presented to our spine clinic with a one year history of progressive neck pain accompanied by a six month history of upper extremity weakness and increased difficulty with hand coordination that limits her ability to write and perform simple task.

Magnetic resonance (MR) imaging demonstrated a contrast enhancing intramedullary mass extending from cervical level 2 – 6, approximately 1.5 x 2.3 centimeter (cm) in size (Figure 1a).

After failing conservative management and observation, the patient was taken for surgical resection with NaFl guidance.
University of Colorado Experience:
Intraoperative sodium fluorescein for resection of spinal cord lesions

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Case 2:  
\textbf{Presentation:} 36 year-old female patient with a prior medical history significant for a prior disc replacement who presented with increased lower back pain in the last two month with multiple level radicular symptoms in her lower extremity and difficulty with ambulation.

Initial Computed Tomography (CT) myelogram of her spine demonstrated a lesion at the level of her second and third lumbar vertebrae. Follow-up MR imaging demonstrated a 1.3 x 1.5 x 4.9 cm intradural lesion with significant mass effect (Figure 2a).
University of Colorado Experience:
Intraoperative sodium fluorescein for resection and biopsy of spinal cord lesions

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Case 3:

**Presentation:** 55 year old female patient who initially presented to UCH on 09/21/2017 with lower extremity weakness, saddle anesthesia and bladder incontinence.

MR Imaging of her thoracic spine demonstrated a T1 Contrast Enhancing Lesion
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MR Imaging of her thoracic spine demonstrated a T1 Contrast Enhancing Lesion

* Work In Progress*
University of Colorado Experience:

* Work In Progress*
Conclusions:

1. NaFL is associated with a high sensitivity and specificity for tumor pathology

2. NaFL can be used in the spine for localization, resection and biopsy of lesion