MeSH Changes and PubMed Searching

January 27, 2023

NLM, NNLM Training Office

Before We Start

- Captions: click “Closed Captions” button
- Chat: send questions to EVERYONE
- Handout: link in chat
- Reactions: give me a thumbs up!

MeSH Changes and PubMed Searching Training

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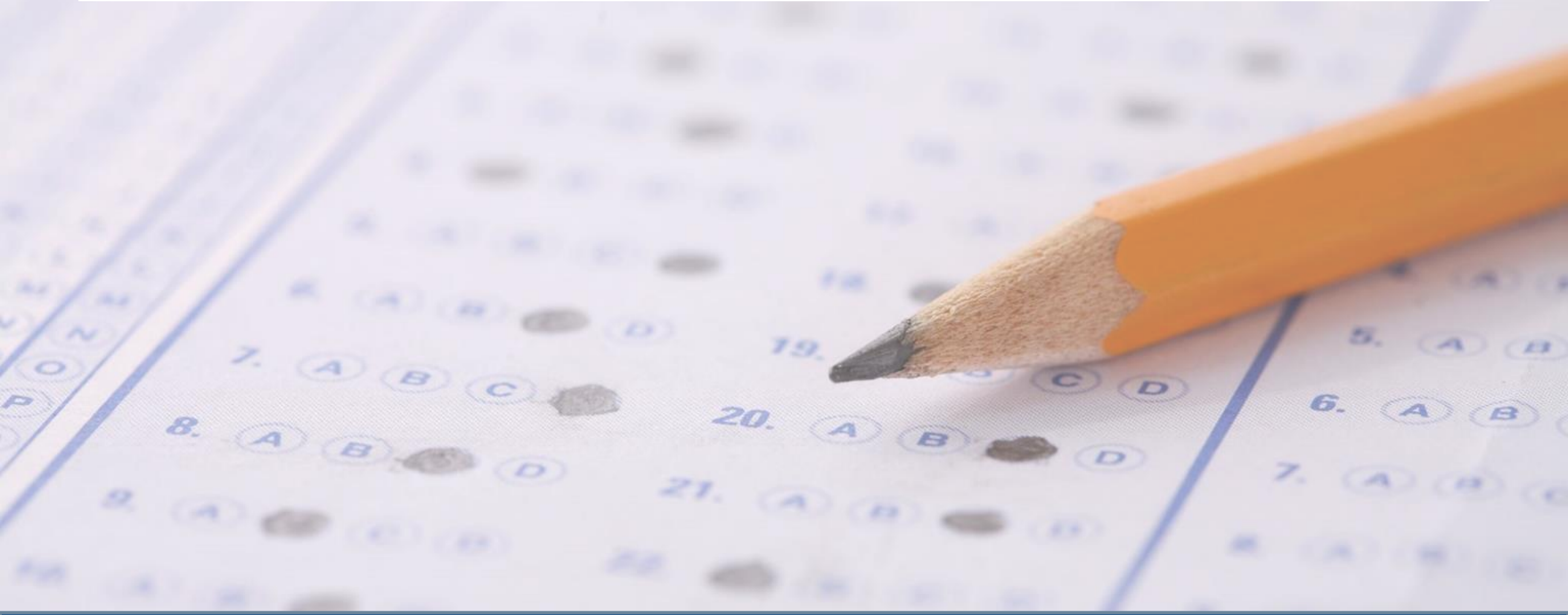
NLM, NNLM Training Office

Pre-Test



Agenda

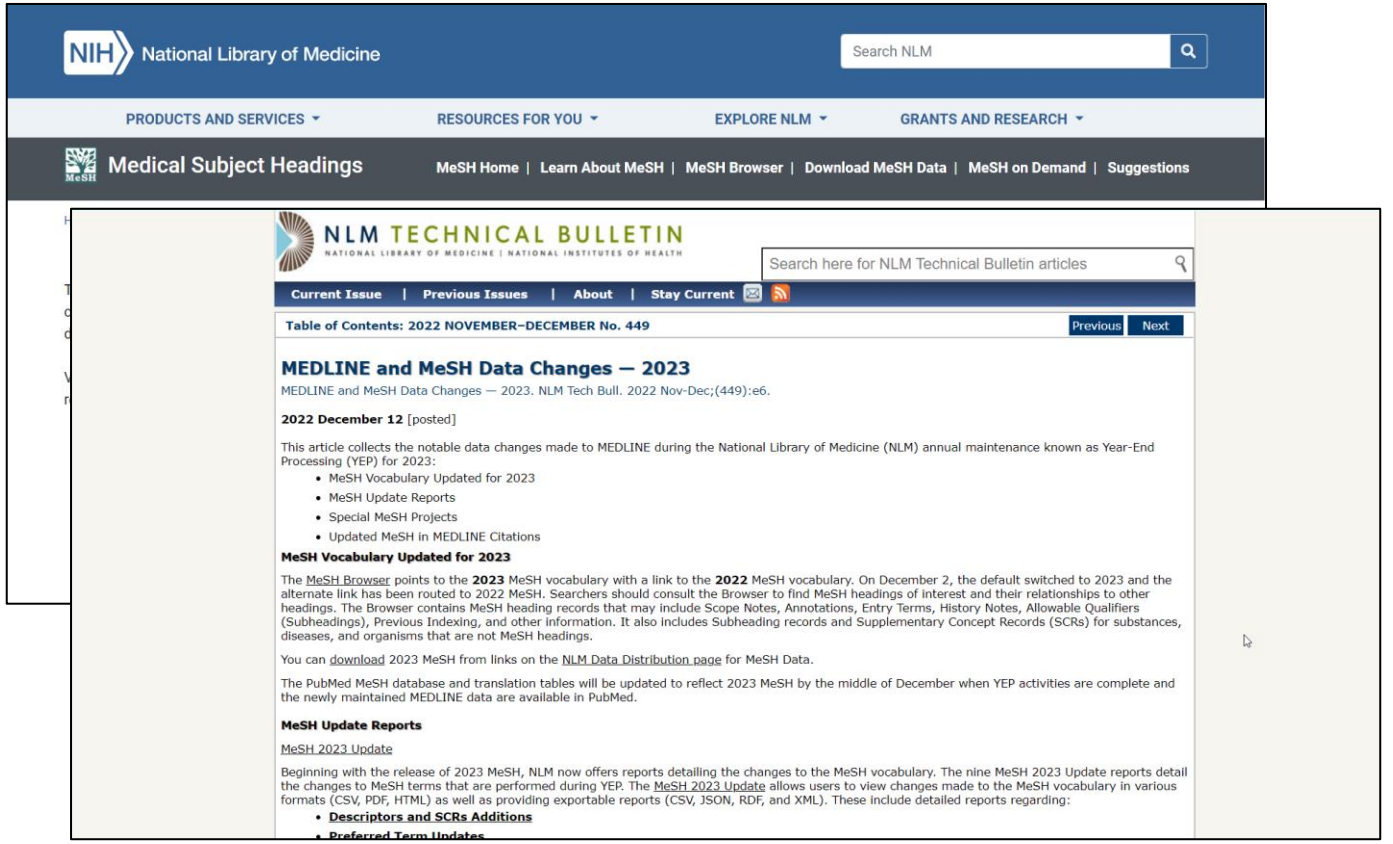
- Pre-Test
- What happens when MeSH is updated?
- Examples of MeSH changes
- Post-Test

New MeSH Terms in the New Year

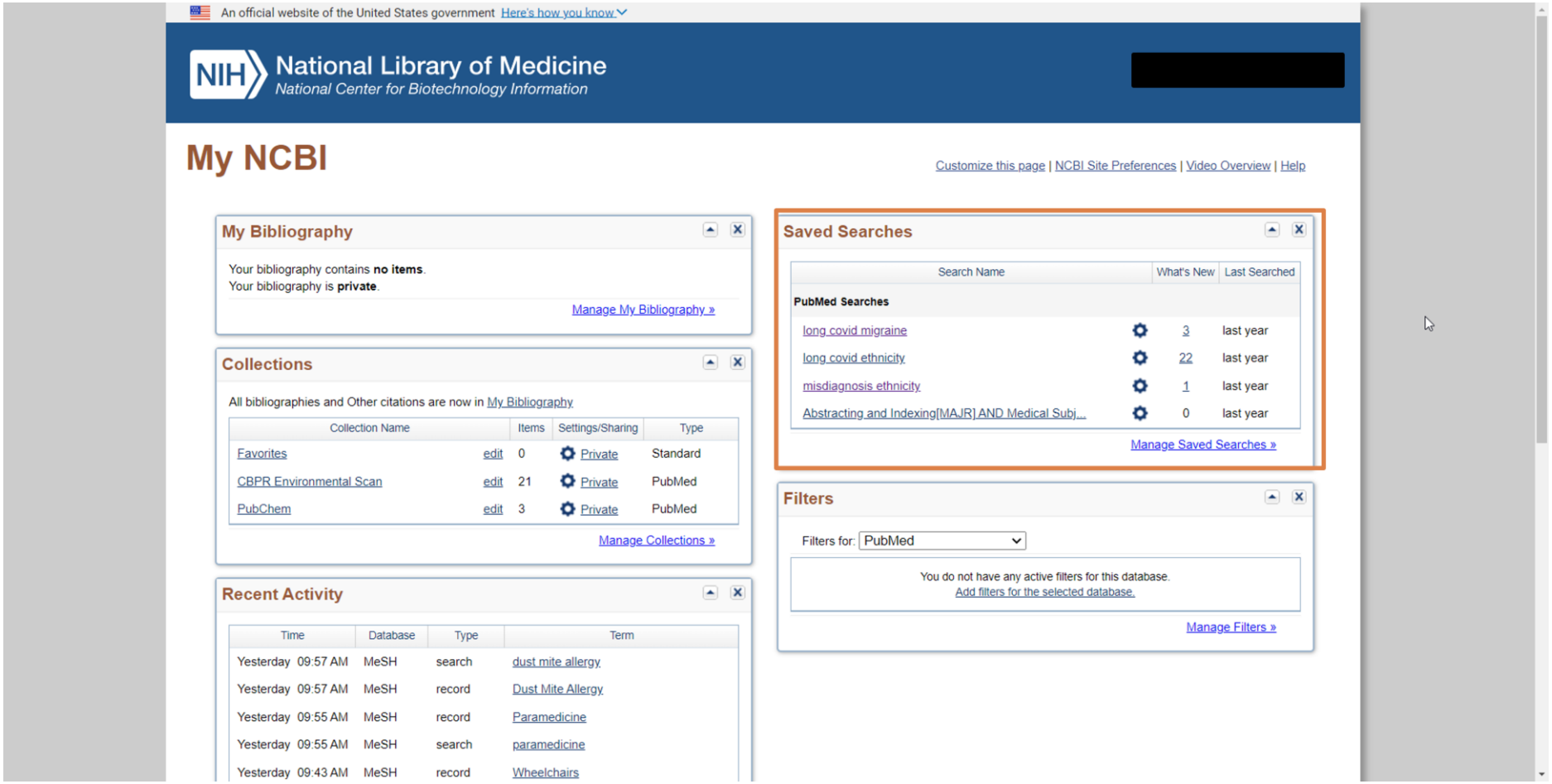
- New term with same meaning
- New term that is more specific
- Hierarchy changes

MeSH changes are documented:

- On the MeSH homepage
- In the NLM Technical Bulletin



Example of Saved Search



Quiz 1

How far back can you search with the MeSH term **Post-Acute COVID-19 Syndrome**?

a) 1963

b) 1983

c) 2020

d) 2023

Quiz 2

How far back can you search with the MeSH term **Plastic Surgery Procedures**?

a) 1963

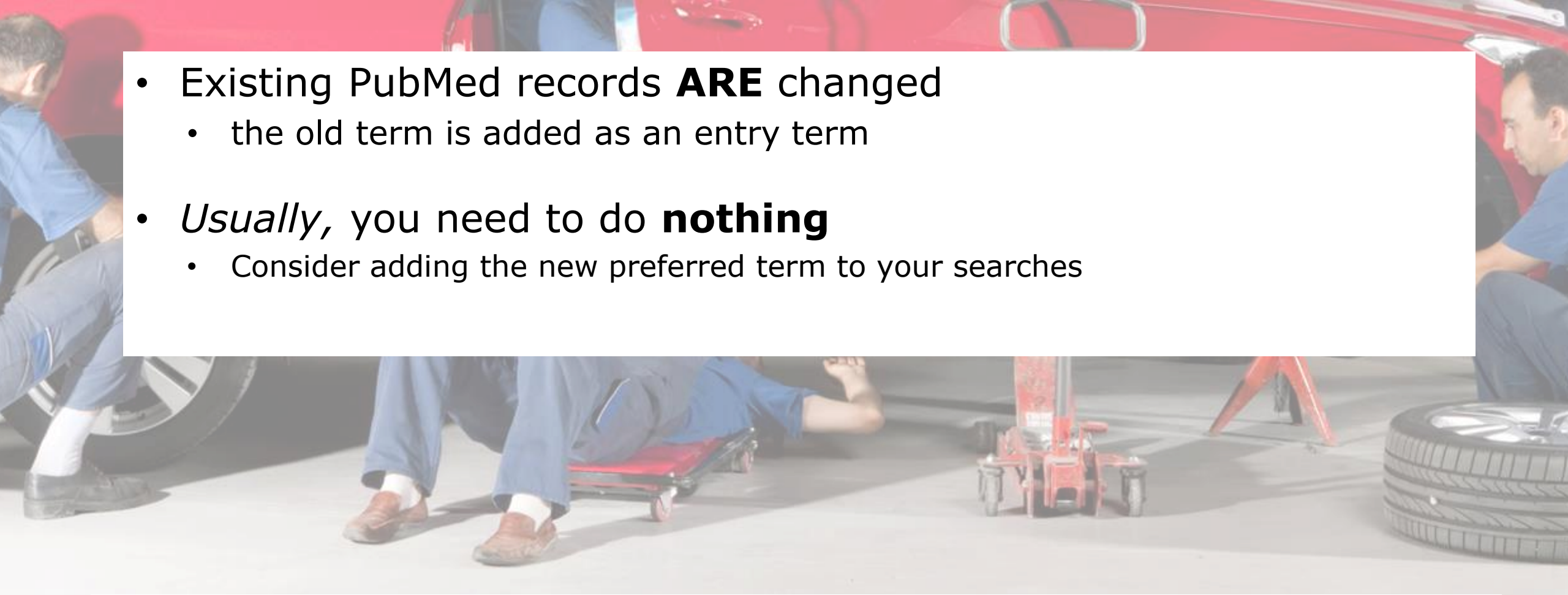
b) 1998

c) 2022

d) 2023

Questions?

New Term with Same Meaning



- Existing PubMed records **ARE** changed
  - the old term is added as an entry term
- *Usually,* you need to do **nothing**
  - Consider adding the new preferred term to your searches

New Term with Same Meaning

Quiz 3

Which MeSH term does a search for **Alien Hand Syndrome** map to?

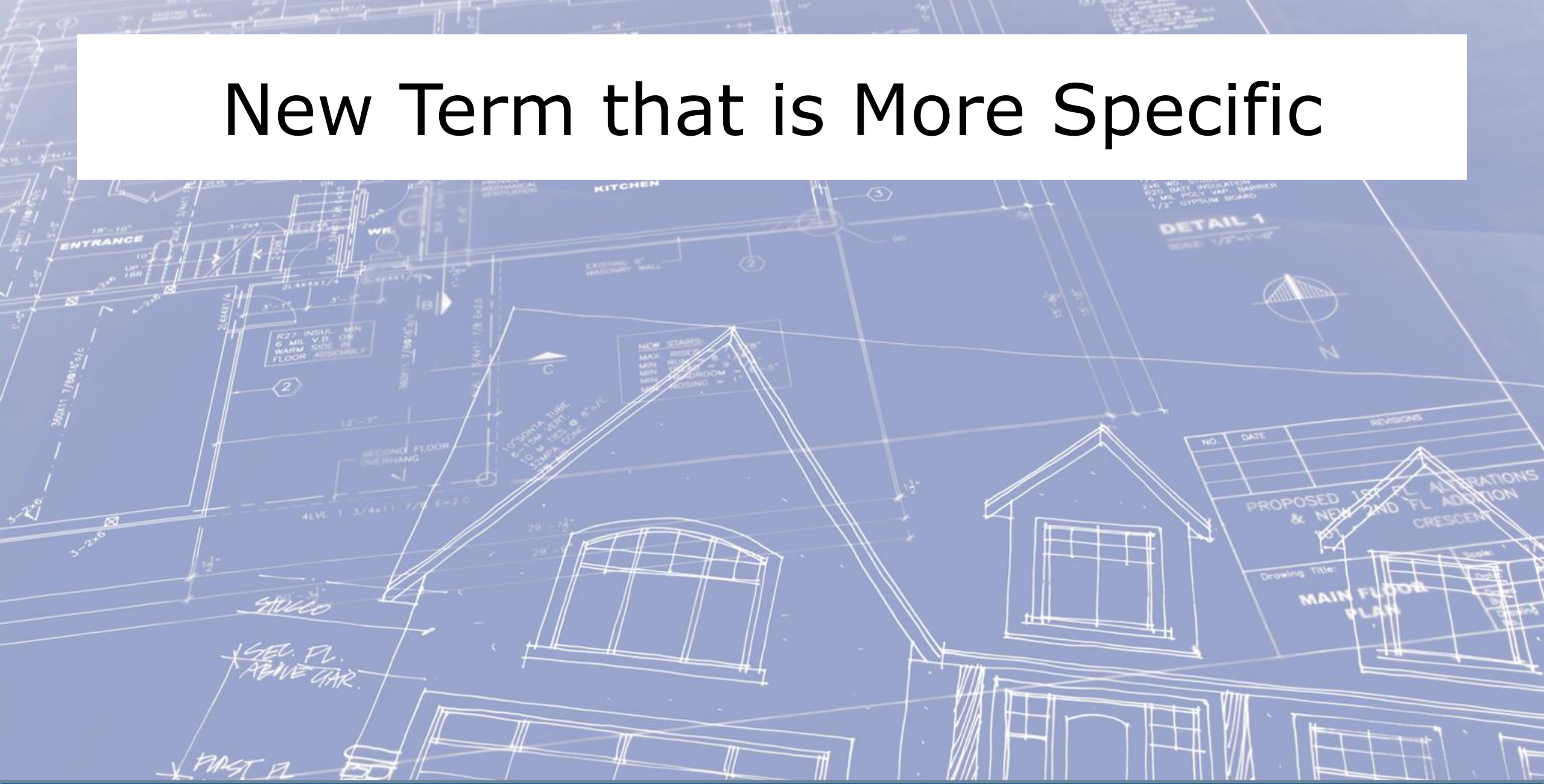
a) Alien Hand Syndrome

b) Alien Limb Phenomenon

c) It does not map

d) Alien Limb Syndrome

New Term that is More Specific



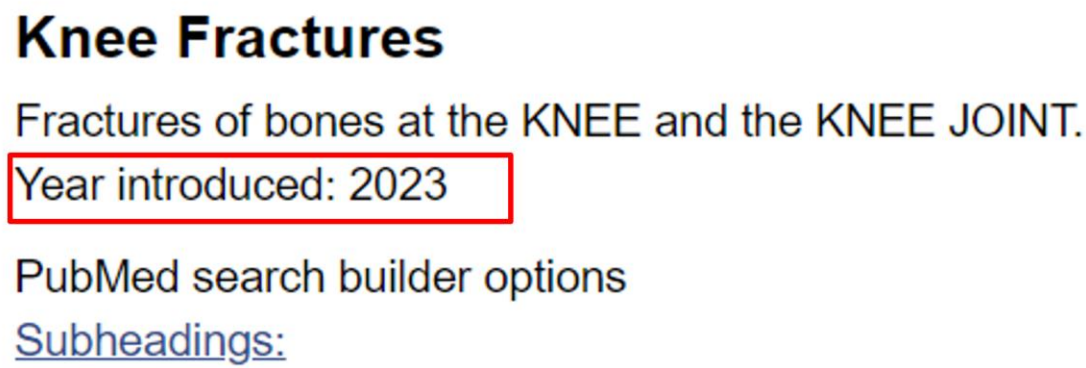
New Term that is More Specific (cont.)

- Existing records are generally **NOT** changed
- Consider using the new, more specific term to retrieve newly indexed records
- Use Previous Indexing and/or the broader term with the **[mhda]** search tag to search previously-indexed records

Exercise 1: Question 1

How far back can I search with Knee Fractures?

Answer: 2023



Exercise 1:Question 2

Where do I look in the MeSH record for terms used prior to 2023?

Answer: Previous Indexing

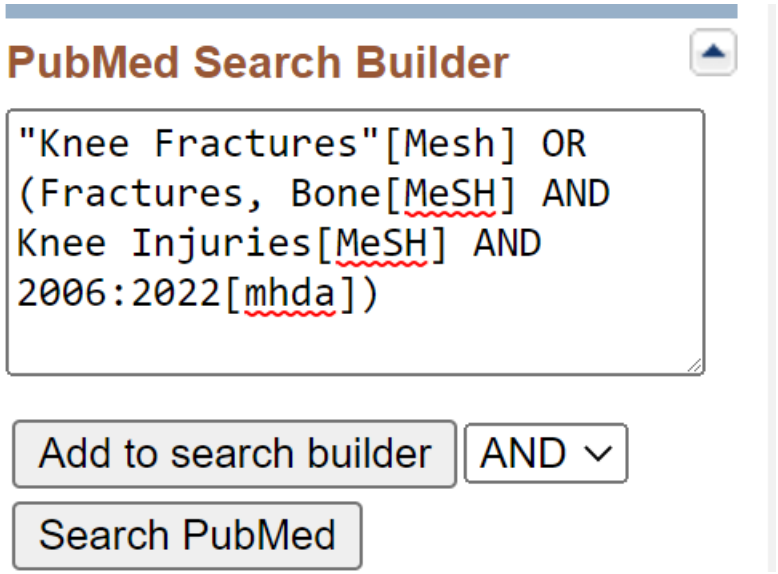
Previous Indexing:

- Fractures, Bone (2006-2022)
- Knee Injuries (1963-2022)

Exercise 1:Question 3

What field tag do I use to limit to records indexed between 2006 and 2022?

- **Answer:** [mhda]



Hierarchy Changes Examples

Hierarchy Changes: Example 1

MeSH 2022

Lactobacillaceae [B03.353.750.450]
- Lactobacillus [B03.353.750.450.475]
  - Lactobacillus acidophilus [B03.353.750.450.475.100]
  - Lactobacillus brevis [B03.353.750.450.475.180]
  - Lactobacillus casei [B03.353.750.450.475.225]
  - Lactobacillus crispatus [B03.353.750.450.475.238]
  - Lactobacillus delbrueckii [B03.353.750.450.475.250]
  - Lactobacillus fermentum [B03.353.750.450.475.325]
  - Lactobacillus gasseri [B03.353.750.450.475.363]
  - Lactobacillus helveticus [B03.353.750.450.475.400]
  - Lactobacillus johnsonii [B03.353.750.450.475.453]
  - Lactobacillus leichmannii [B03.353.750.450.475.506]
  - Lactobacillus paracasei [B03.353.750.450.475.559]
  - Lactobacillus pentosus [B03.353.750.450.475.586]
  - Lactobacillus plantarum [B03.353.750.450.475.612]
  - Lactobacillus reuteri [B03.353.750.450.475.680]
  - Lactobacillus rhamnosus [B03.353.750.450.475.700]
  - Lactobacillus sakei [B03.353.750.450.475.775]
  - Lactobacillus salivarius [B03.353.750.450.475.850]

Hierarchy Changes: Example 1 (cont.)

MeSH 2023

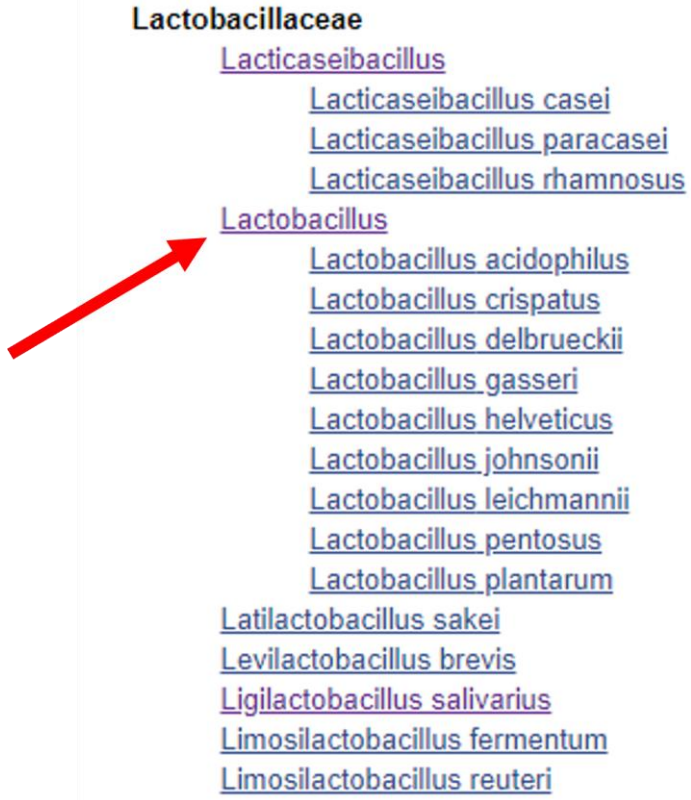
Lactobacillaceae

- Lacticaseibacillus
  - Lacticaseibacillus casei
  - Lacticaseibacillus paracasei
  - Lacticaseibacillus rhamnosus
- Lactobacillus
  - Lactobacillus acidophilus
  - Lactobacillus crispatus
  - Lactobacillus delbrueckii
  - Lactobacillus gasseri
  - Lactobacillus helveticus
  - Lactobacillus johnsonii
  - Lactobacillus leichmannii
  - Lactobacillus pentosus
  - Lactobacillus plantarum
- Latilactobacillus sakei
- Levilactobacillus brevis
- Ligilactobacillus salivarius
- Limosilactobacillus fermentum
- Limosilactobacillus reuteri

Exercise 2

MeSH 2022

MeSH 2023



Hierarchy Changes: Example 2

MeSH 2022

Aneurysm [C14.907.055]

Aneurysm, Dissecting [C14.907.055.050]

Carotid Artery, Internal, Dissection [C14.907.055.050.150]

Loeys-Dietz Syndrome [C14.907.055.050.362]

Vertebral Artery Dissection [C14.907.055.050.575]

Hierarchy Changes: Example 2 (cont.)

MeSH 2023

Aneurysm

Dissection, Blood Vessel

Aortic Dissection

Dissection, Abdominal Aorta

Dissection, Thoracic Aorta +

Ehlers-Danlos Syndrome, Type IV

Carotid Artery, Internal, Dissection

Vertebral Artery Dissection

Exercise 3

MeSH 2022

Aneurysm [C14.907.055]

Aneurysm, Dissecting [C14.907.055.050]

Carotid Artery, Internal, Dissection [C14.907.055.050.150]

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MeSH 2023

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Dissection, Blood Vessel

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Dissection, Abdominal Aorta

Dissection, Thoracic Aorta +

Ehlers-Danlos Syndrome, Type IV

Carotid Artery, Internal, Dissection

Vertebral Artery Dissection

Hierarchy Changes

- Can result in dramatic retrieval changes
- Offer an improvement to your explosions
- Take a fresh look at the new hierarchy and reconsider your search

Exercise 4

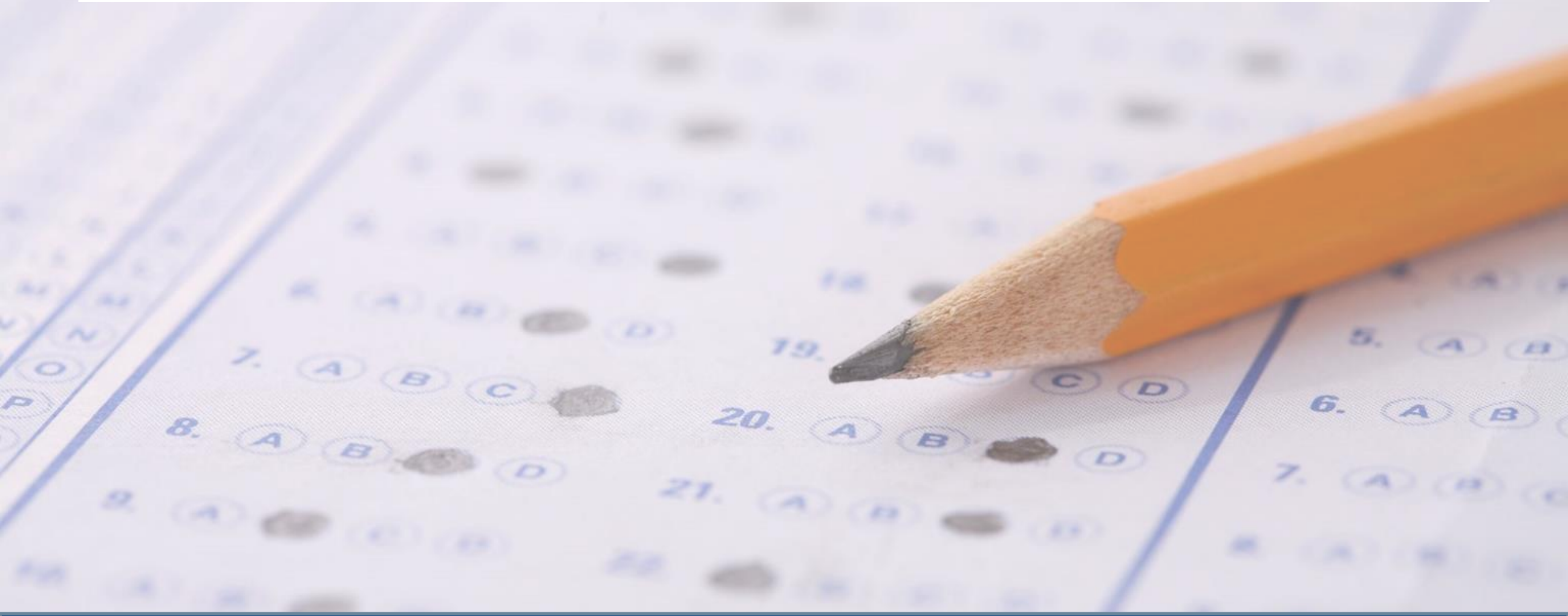
- You want to search PubMed as comprehensively as possible, back to 2010, for literature related to Paramedicine. How would you do this?

Exercise 5

- You want to search PubMed as comprehensively as possible, back to 2015, for literature related to Dust Mite Allergy. How would you do this?

Additional Questions?

Post-Test



Post-Test Questions

1. When a new, more specific MeSH heading is added to the vocabulary, it is applied to records that were indexed in previous years.
   a. True
   b. False

2. When a MeSH term is replaced, the term that was replaced is retained in MeSH as a(n):
   a. MeSH Term
   b. Entry Term
   c. Supplementary Concept

3. The PubMed search results for a new, more specific term (e.g., Systemic Racism) will be included in the results for the broader term above it (e.g., Racism).
   a. True
   b. False

4. If my saved search suddenly retrieves many more or many fewer citations on a regular basis starting at the end of a calendar year, what is the most likely explanation? (Check the best answer)
   a. A changed MeSH term with the same meaning
   b. A new MeSH concept
   c. Hierarchy changes to MeSH

Post-Test Answers

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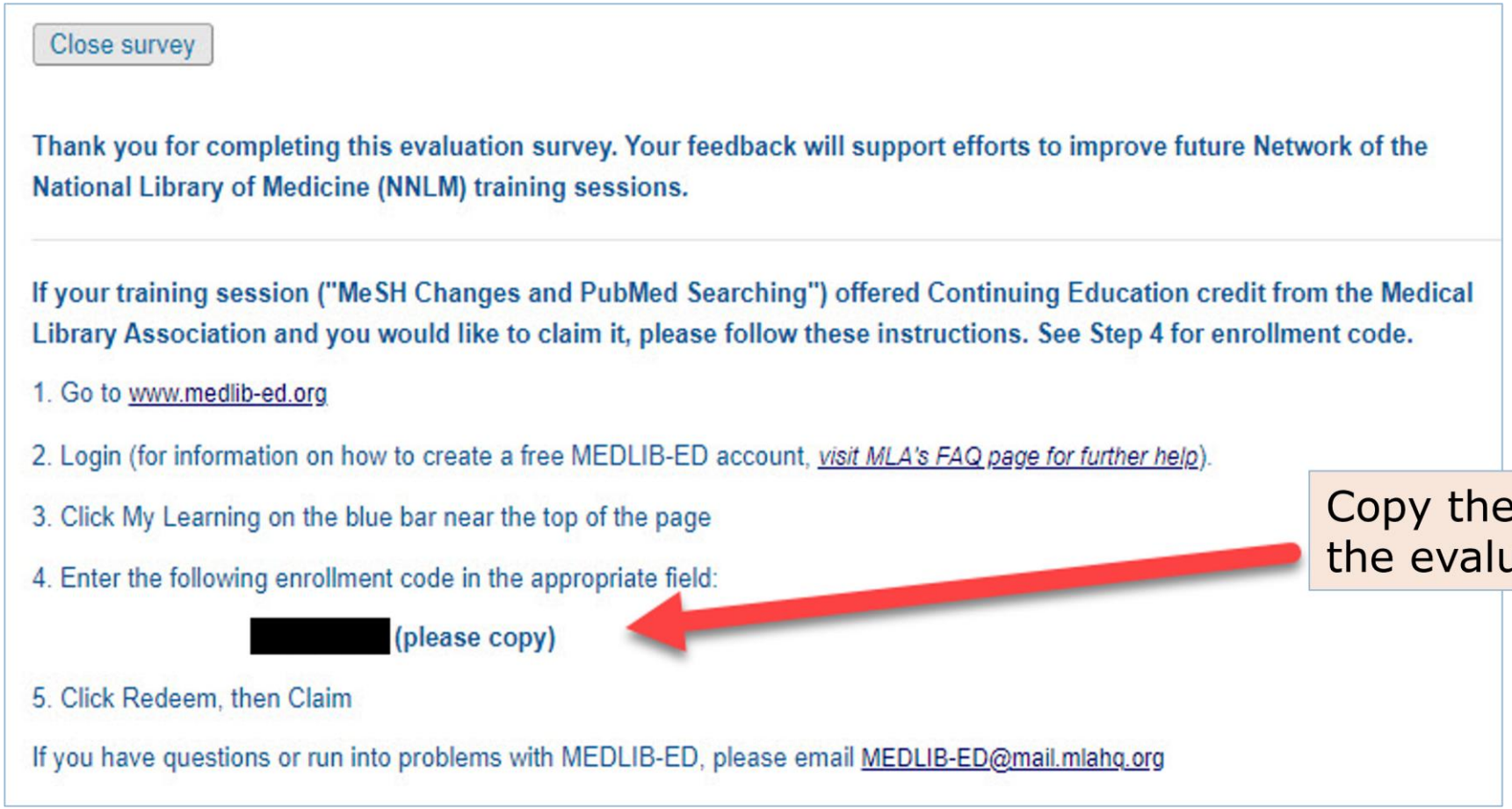
Summary

- To adjust to changes in MeSH,
  - Check MeSH mappings in your PubMed Search Details
  - Check automatic explosions in MeSH
- Craft searches for older records by using:
  - Year Introduced
  - Previous Indexing and/or broader terms with
  - [mhda]
- Read about the MeSH changes in October and the year-end changes to MEDLINE in December in the NLM Technical Bulletin.

How to Get Your MLA CE



Copy the code from the evaluation survey