

Title:

Scripts for the “PubMed Tutorial for Veterinarians”

“PubMed Tutorial for Veterinarians” URL:

http://cases.vetmoodle.org/CET_CoursePlayer/demo1/public/pubmed.html

Digital collection of the documents for the “PubMed Tutorial for Veterinarians”:

<http://hdl.handle.net/1969.1/158203>

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PubMed tutorial script for the “PubMed for veterinarians” tutorial

Beginning with PubMed

The internet address for PubMed is
pubmed.gov

We do not have a lot of information right now. We know our patient is an older cat, and we’ve thought through a preliminary differential diagnosis list: renal disease, hyperthyroidism, and cancer. However, we do have enough information to provide search terms that will help us begin a PubMed search for hyperthyroid literature concerning cats. For this tutorial, we will focus on hyperthyroidism.

Let’s start with the terms “hyperthyroid” and “cats.”

The search returned over 400 article citations. We don’t have time, nor is it efficient, to browse that many articles before the appointment. How can we narrow the results to the most relevant articles and make this more manageable?

Additional Filters

Let’s limit the results to the most recent 5 years. Click the 5 years filter.

Notice the checkmark to the left of the activated filter.

Notice the filter status line inserted just above our first result. Here, we see the active filters, have a link to clear all the filters, and are reminded about how many unfiltered results our search yielded.

Our unfiltered results were 425 items. Filtering our results to the most recent 5 years reduces the results to 106.

To clear the filter, we can click Clear all in the filter status line or click the 5 years filter on the left.

Activating the Subjects filter for the Veterinary Science subset requires several steps.

First, click Show additional filters.

Choose Subjects from the list of available filters in the pop-up box.

Then click Show to display the Subjects filters on the results screen to make your selection.

Veterinary Science does not display by default. Click Customize.

Click Veterinary Science.

Click Show to display it as a filter choice on the results screen.

Click Veterinary Science.

A checkmark appears to the left indicating it is active.

Just above the first result a new line appears, which lists the activated filters, provides a link to clear the filters, and notes how many results were in your unfiltered list.

Here is our Results screen with the Subjects filters, including Veterinary Science, displaying on the left side of the screen.

You may activate more than one filter at the same time.

Here, we've clicked 5 years under the Publication date filter and Veterinary Science under the Subjects filter.

In our example case, our search topic "hyperthyroid cat" is already clinical-veterinary-specific, and the number of results did not change much when we activated the Veterinary Science filter.

As you search PubMed, you'll notice that the search topic and search terms determine whether the Veterinary Science filter impacts the results.

Search Details Box

There are three reasons this search worked well.

1. We had three strong search terms and each clearly represented a concept in the search: species, disease, and treatment or intervention.
2. In the Search details box, you see how PubMed interpreted your search. Here, we can verify PubMed automatically inserted the Boolean connector AND between each of the search concepts and inserted OR between the different ways to describe the concepts.
3. Click 'see more' ... you also see PubMed took our search terms and matched them to standard subject headings or MeSH. PubMed used Automatic Term mapping to match "hyperthyroid" to the subject heading "hyperthyroidism" and "cats" to the subject heading "cats." These display in the Search details as the search command

“hyperthyroidism”[MeSH Terms] AND “cats”[MeSH Terms]. PubMed also searches for “hyperthyroid” and “cats” as free-text words in all fields.

Refining Search Terms

In previous portions of the tutorial, we worked with a good pool of results for “hyperthyroid cats” and “hyperthyroid cats methimazole.” Let’s look at what happens when we add the search term “transdermal.”

We get very few specific results. Look at the Search details box to see how PubMed interpreted the search term “transdermal.”

One of the articles looks promising from its title. Click the title to see the full record, including its abstract.

After reading the abstract, you decide this is a useful article. You would like to find more articles like this.

On the right side of the screen, look for Related citations in PubMed. PubMed uses an algorithm to determine the articles in PubMed that are most similar to the one you chose. This works best if you’re looking at an article that almost perfectly addresses your research question.

Click See all to see the citations related to your article. Results will display with the most relevant first. The record you clicked away from is always the first result because, as the one you chose, it is the most relevant.

Related citations in PubMed is particularly useful if you cannot find many articles. It can help identify similar articles, and in those similar articles, you may find other search terms to help expand your search.

Doctor's scripts for the "PubMed for veterinarians" tutorial

Preparing for Today's Appointments Script

Hi, I'm Dr. Cameron! I've been looking over my list of appointments for today and see that my longtime patient Riply the cat is coming in for his annual examination and his owners mentioned he has lost weight since last year's exam.

I see Riply is 13 now and we have no previous blood work on file for him. I have not yet examined him, but given his age, hyperthyroidism, renal disease, and cancer are currently my top three differentials.

I want to find evidence-based information that will help me address my patients' needs and also fits within my clients' preferences.

I wonder if treatment recommendations for hyperthyroidism have changed lately. I am currently treating several feline patients with renal disease, but I haven't treated a hyperthyroid cat lately, nor have I recently been to any continuing education for feline endocrinology. I'm going to begin with a search in PubMed to survey literature about feline hyperthyroidism before the appointment.

I have a computer and Internet connection, so it doesn't cost me anything to search PubMed and read the citations and abstracts. PubMed even has links to some freely available articles.

Let's go to PubMed.

A call to Ripley's owners

Hello again! I just spoke to Ripley's owners about his test results.

According to the thyroid panel results, Riply has hyperthyroidism.

Along with the weight loss, he shows significant muscle loss. This could indicate kidney disease; however, thyroid disease can mask kidney disease, so although the chem panel results are normal, they may not reflect the true kidney chemistry.

We decided to medicate Riply to try to stabilize his thyroid. Then we will re-run the bloodwork and look for thyroid stabilization and kidney disease indicators.

If his kidneys are stable, I believe he could be a candidate for I-131 treatment. Riply's owners like the idea of I-131 because they cannot give him pills.

In the meantime, I need to investigate other treatment options.

We discussed feeding prescription food or treats with methimazole mixed in because he is not a picky eater, but he is free-fed with four other cats and the owners are concerned the other cats could get some of his food.

I've never prescribed transdermal methimazole, but I asked if he's sensitive about having his ears touched and they say he loves it and purrs when they do it.

I want to find out more about methimazole and transdermal methimazole before discussing a treatment plan with the owners.

So, back to PubMed I go.

Wrapping up Ripley's Case

Good news, the new bloodwork results are back from the lab. Ripley's thyroid test result shows a drop in T4 and is now the high end of normal. Also, his chemistry panel does not indicate kidney disease.

I'll tell Ripley's owners the good news that he does not have kidney disease, and is therefore a good candidate for I-131 treatment.