Table A1. Evaluation participants

| ID | Gender | Clinical role | Specialty       | Years of practice |
|----|--------|---------------|-----------------|-------------------|
| 1  | F      | Resident      | Family Practice | 2                 |
| 2  | F      | Resident      | Family Medicine | 2                 |
| 3  | M      | Resident      | Family Medicine | 1                 |
| 4  | F      | Resident      | Family Medicine | 3                 |
| 5  | F      | Resident      | Family Practice | 2.75              |
| 6  | M      | Attending     | Anesthesiology  | 5                 |
| 7  | F      | Attending     | Cardiology      | 10                |
| 8  | M      | Resident      | Emergency Medicine | 4               |
| 9  | M      | Attending     | Internal medicine hospitalist | 15          |
| 10 | M      | Attending     | Internal Medicine | 21              |
| 11 | M      | Resident      | Family Medicine | 2                 |
| 12 | F      | Resident      | Family Medicine | 3                 |
| 13 | F      | Resident      | Family Medicine | 2                 |
| 14 | M      | Resident      | Family Medicine | 2.75              |
| 15 | M      | Attending     | Internal medicine and pediatrics | 13         |
| 16 | M      | Resident      | Internal Medicine | 1               |
| 17 | M      | Resident      | Internal Medicine | 1               |
| 18 | M      | Attending     | Nephrology/Int Med | 43          |
| 19 | F      | Attending     | Internal medicine | 24              |
| 20 | F      | Attending     | Geriatrics      | 17                |

Table A2. Open-ended comments and category

| Comments                                                                                                                                                                                                 | Category                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|
| The legends and keys for the bar graphs are a little hard to see, it seems they require dragover with the cursor, it would be nice if they were clearly displayed so I knew what the bars meant intuitively. Provide serial numbers in the first column. (I) will be happy to be involved in further refining this tool later as well. Make sure things all show up appropriately: in the DM interactive visual display the side effect UTI-female was two tabs so different studies had their results show up under different tabs instead of showing up together and being comparable. It was a really cool comparison tool! It would be great if it were possible to compare more than 4 studies at a time. It would be nice to have a select all or de-select all check boxes on the left-hand side. | Request for clearer display Request for more information 1) Great tool; 2) Allow more than 4 studies for comparison; 3) Request for clearer display Request for more features |
It was very effective as a clinical tool. I cannot think of any improvements.
It was great, I can imagine using this tool all the time in my practice!
It is awesome! Maybe a way to display more RCTs at once with the comparison tools.

Include more than 4 studies at a time
I would have liked to see error bars on some of the graphs. In these vignettes, the 10 studies were provided, but how will you propose coming up with those 10 studies in real-life clinical practice?
I think that it would be nice to make graphical comparisons of more than 4 studies at once if need be
I am very familiar with abstract format, so I think that is why I liked PubMed. I question whether the right trials were included in interactive visual display. I have control over this is PubMed search. A quick link to the right clinical guidelines may be more helpful than the actual RCTs because I know the process by which that data is vetted for accuracy and I know I would practicing in accordance with current standards.
great tool, less incentive to read methods and figure out the validity of a study as the results are prominently displayed but could easily do. if simple validity criteria are available that would be really something.
Continue to maintain easy use of the tool.

| 1) Great tool; 2) Allow more studies for comparison |
| Allow more than 4 studies for comparison |
| Request for more information |

Table A3. Correlation analysis between years of expertise, tool presentation order, clinical role, experience with literature search, experience with cases in the domain of the vignettes and perception variables
|                      | Years of expertise | Tool presentation order | Clinical role | Experience with cases in the domain of the vignettes | Experience with literature search |
|----------------------|--------------------|-------------------------|---------------|----------------------------------------------------|---------------------------------|
| **Efficiency**       | Pearson Correlation| 0.124                   | -0.189        | -0.218                                             | 0.011                           |
| Sig. (2-tailed)      | 0.623              | 0.439                   | 0.371         | 0.965                                             | 0.659                           |
| N                    | 18                 | 19                      | 19            | 18                                                | 18                              |
| **Effectiveness**    | Pearson Correlation| 0.212                   | -0.191        | -0.079                                             | -0.007                          |
| Sig. (2-tailed)      | 0.384              | 0.42                    | 0.742         | 0.977                                             | 0.423                           |
| N                    | 19                 | 20                      | 20            | 19                                                | 19                              |
| **Effort**           | Pearson Correlation| 0.086                   | -0.254        | -0.193                                             | -0.041                          |
| Sig. (2-tailed)      | 0.728              | 0.281                   | 0.415         | 0.869                                             | 0.637                           |
| N                    | 19                 | 20                      | 20            | 19                                                | 19                              |
| **User Experience**  | Pearson Correlation| 0.359                   | -0.125        | -0.028                                             | 0.055                           |
| Sig. (2-tailed)      | 0.144              | 0.611                   | 0.909         | 0.829                                             | 0.507                           |
| N                    | 18                 | 19                      | 19            | 18                                                | 18                              |
| **Preference**       | Pearson Correlation| 0.166                   | -0.177        | -0.269                                             | -0.016                          |
| Sig. (2-tailed)      | 0.497              | 0.456                   | 0.251         | 0.947                                             | 0.559                           |
| N                    | 19                 | 20                      | 20            | 19                                                | 19                              |
Figure A1. PubMed® default search results display with four trials on various treatments for diabetes mellitus (https://www.ncbi.nlm.nih.gov/pubmed/?term=25200570+27060930+25805187+25583754%5Buid%5D)
**Figure A2. Comparison table display for rheumatoid arthritis RCTs**

**Case Vignettes**
**Acute Coronary Syndrome**

A 56-year-old Chinese patient, Mr. Lee presents to the Emergency room with symptoms of acute coronary syndrome. He is seen by a resident who notices an elevated lipid profile. He says that he is on some lipid lowering therapy but more details are not available. The resident wants to find out the best lipid lowering therapy that he could start Mr. Lee on, in this situation.

Which lipid lowering drug should the resident choose?

*Clinical Trial Studies PMID:* 26486166 and 25879728.

**Rheumatoid Arthritis**

Mary is a 34-year-old Caucasian woman diagnosed with rheumatoid arthritis (RA). Her initial treatment was methotrexate (MTX) 15 mg/wk orally for 4 weeks, with escalation to 20 mg/wk for another 4 weeks, and then a maintenance dose of subcutaneous MTX 25 mg/wk.

At the 6-month follow-up visit, she reports an improved overall assessment of disease activity. However, she is still experiencing some morning stiffness and functional limitations. Inflammation of joints in her hands has resulted in a loss of the ability to work. Radiographic results indicated several erosions of MCPs in each hand; her ESR was 39 mm/h and C-reactive protein (CRP) was 3.3 mg/dL. She had 8 tender and 11 swollen joints, and the disease activity score (DAS28) was 5.76, indicative of high disease activity.

The rheumatologist decides to enhance the current treatment of MTX monotherapy and considers the options of adding an additional disease-modifying antirheumatic drug (DMARD). The ideal drug of choice for Mary would one that would increase her function, reduce disease activity, and reduces radiological disease progression, while minimizing the possibility of adverse reactions.

*Clinical Trial Studies PMID:* 18593759, 15529377, 24907147, 25050591, 25769495, 16385520, 24550168, 26063454, 24670196 and 25623393.

**Diabetes Mellitus**

Agnes is a 51-year-old female with hypertension who received a diagnosis of type 2 diabetes a decade ago. She has been worried about her diabetes since then because she has not been able to gain
complete control over it. Her HbA1c was 7.0% for 1 year but gradually increased to 9.0%. For the past 2 years, she has been taking metformin 2000 mg daily. She is maintaining her weight at 165 pounds (75 kg), but she is not able to lose weight. Agnes goes to the gym and walks on a treadmill three times a week. She tells you that she has made as many lifestyle changes as she can. Agnes' hypertension is well controlled with an ACE inhibitor; she also takes a statin. Her most recent tests showed LDL cholesterol of 85 mg / dL and HDL of 62 mg / dL.

Agnes hates needles and won't use insulin. Her sister, who also has diabetes, was receiving glipizide but had episodes of hypoglycemia while taking that drug, including one episode that resulted in an auto accident. Agnes is also worried about weight gain associated with that drug. Her sister recently switched from glipizide to saxagliptin and has had no further episodes of hypoglycemia. Agnes has also heard about a new type of drug that works by eliminating excess glucose through the urine. She wants to know about the safety of the newer drugs. You explain to her that the drugs she is asking about are in different classes - dipeptidyl peptidase 4 (DPP-4) inhibitors ("gliptins") and sodium glucose cotransporter 2 (SGLT2) inhibitors ("gliflozins").

Do you think a second drug should be added to the metformin Agnes is currently receiving? If so, what drug?

*Clinical Trial Studies PMID: 24199686, 22413962, 25200570, 27060930, 24186878, 24026211, 23604551, 24965700, 25805187 and 25583754.*

Post Evaluation Survey

**Demographic questions**

| Specialty               | *FREE TEXT |
|-------------------------|------------|
| Years of practice since medical school graduation |            |

Please indicate how much % of your time do you typically dedicate to each of the following activities:
|                                      | Less than 25% | 25 to 50 % | 50 to 75% | More than 75% |
|--------------------------------------|---------------|------------|-----------|---------------|
| Clinical practice                    |               |            |           |               |
| Research                             |               |            |           |               |
| Clinical teaching                    |               |            |           |               |

**Please rate your experience according to the items below**

**CLINICAL**

|                                           | Little experience | 2 | 3 | 4 | 5 |
|-------------------------------------------|-------------------|---|---|---|---|
| Dealing with patients in the same clinical domain of the narrative abstracts case vignette | 1 | 2 | 3 | 4 | 5 |
| Dealing with cases with similar clinical complexity as in the case presented in the narrative abstracts vignette | 1 | 2 | 3 | 4 | 5 |
| Dealing with patients in the clinical domain of the interactive visual display case vignette | 1 | 2 | 3 | 4 | 5 |
| Dealing with cases with similar clinical complexity as in the case presented in the interactive visual display vignette | 1 | 2 | 3 | 4 | 5 |

**TECHNICAL**

|                                           | Little experience | 2 | 3 | 4 | 5 |
|-------------------------------------------|-------------------|---|---|---|---|
| Experience in using computers for work activities | 1 | 2 | 3 | 4 | 5 |
| Experience in using medical literature search tools in general (e.g., PubMed, UpToDate) | 1 | 2 | 3 | 4 | 5 |
| Experience in using PubMed for medical literature search | 1 | 2 | 3 | 4 | 5 |
When comparing the two formats used in the study, I was able to:

|                              | Narrative |    |    |    | Neutral |    |    |    | Strongly Agree |
|------------------------------|-----------|----|----|----|---------|----|----|----|----------------|
| help me with clinical decisions for specific patients | 1         | 2  | 3  | 4  | 5       | 6  | 7  | 8  | 9               |
| find evidence during patient consultations | 1         | 2  | 3  | 4  | 5       | 6  | 7  | 8  | 9               |
| find evidence after patient consultations | 1         | 2  | 3  | 4  | 5       | 6  | 7  | 8  | 9               |
| scan the information quickly | 1         | 2  | 3  | 4  | 5       | 6  | 7  | 8  | 9               |
| comprehend the meaning well of the information presented | 1         | 2  | 3  | 4  | 5       | 6  | 7  | 8  | 9               |
| spend the least degree of mental effort | 1         | 2  | 3  | 4  | 5       | 6  | 7  | 8  | 9               |

When comparing the two formats used in the study, I would use the interactive visual displays to:

|                              | Strongly Disagree | Neutral | Strongly Agree |
|------------------------------|-------------------|---------|----------------|
| help me with clinical decisions for specific patients | 1         | 2  | 3  | 4  | 5       | 6  | 7  | 8  | 9               |
| find evidence during patient consultations | 1         | 2  | 3  | 4  | 5       | 6  | 7  | 8  | 9               |
| find evidence after patient consultations | 1         | 2  | 3  | 4  | 5       | 6  | 7  | 8  | 9               |

Overall, which tool (e.g., PubMed or interactive visual display) would you prefer to use to help patient care decisions?
| *FREE TEXT |
|----------------|
| Please give your suggestions for improving the interactive visual displays |