

Bedside reading: point-of-care reference apps

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One of the great ironies of our age is that many of us carry in our pockets a portal to the collected wisdom of mankind, but use it mainly to look at adorable kitten videos. For clinicians, the smartphone is a godsend, a handheld wonder that crams wheelbarrows full of manuals and even some simple diagnostic tools into a small package measuring about 7 cm × 13 cm. Whether it's an Android, Blackberry, or i-whatever, that phone or tablet you carry around with you grants you nearly instant access to the National Library of Medicine, Food and Drug Administration, National Cancer Institute, US Pharmacopeia, and hundreds of other sites of direct and indirect relevance to your practice. Even better, there are thousands of apps, both paid-for and free, that have been designed to make challenging work lives a little easier.

The following is a by no means exhaustive list of mobile reference works for oncology professionals and clinicians of all stripes, as well as for some for patients. Note that apps for iPhones usually work on iPads and iPod Touch, and devices for Android phones usually work on tablets running the Android operating system, such as the Google Nexus 7. We have even thrown in a few Blackberry-compatible apps for good measure (plus an app that's for serious fun). iPhone apps are available at the iTunes Store; Android Apps are found at Google Play (formerly Android Market). Blackberry apps can be found at us.blackberry.com.

A word of caution before you rush to your nearest e-store for the latest goodies: some apps may not play nicely with your device (less of a problem for users of Apple devices than for Android adherents). It's always a good idea to scroll through user reviews to see how your colleagues and other users feel about a specific app. With that caveat in mind, here they are, in alphabetical order.

ASH Guides, for Android, Blackberry, and iPhone or iPad

This app is available free from the American Society of Hematology. It allows users to download clinical quick reference guides to their devices. ASH currently offers quick reference guides for heparin-induced thrombocytopenia, immune thrombocytopenia, and von Willebrand disease and this year, it plans to release guides for anticoagulant dosing and managing anticoagulant-associated bleeding complications in adults.

Cancer.net, for Android and iPhone

The American Society of Clinical Oncology offers this free patient-centered app designed by oncologists to help patients and caregivers plan and manage their treatment and care. The app includes physician-vetted information on 124 categories of cancer and includes interactive tools such as a notepad for jotting down questions for the next doctor's visit; a medication list that allows patients to photograph and store images of their medicine bottles and store information about dosing instructions and prescription history; a section for recording symptoms; and a Cancer.net newsfeed.

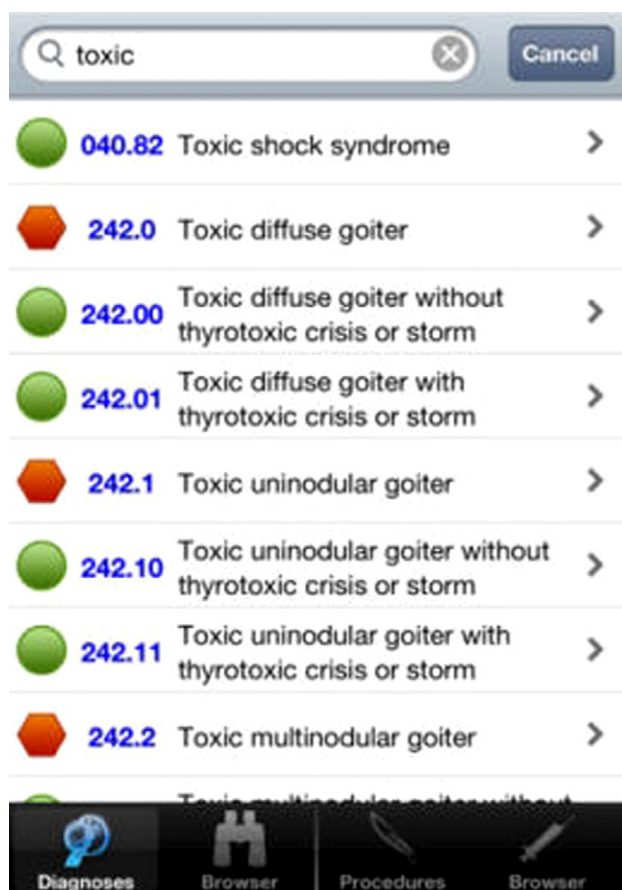
Epocrates, for Android, Blackberry, and iPad or iPhone

This offers a suite of apps including a free drug reference database and, for \$159.99 a year, a program called Essentials that it describes as an "all-in-one" clinical reference source that provides monographs on drug disease as well as diagnostic tools. The content is evidence-based and includes access to treatment guidelines, laboratory tests and panels with reference ranges, tables, approximate test costs, and commonly associated ICD-9s.

Other Epocrates offerings, currently available only for users of Apple devices, include apps and reference tools on anatomy, cardiology, neurology, and pregnancy and fetal development.

ICD-9 Consult 2013, for iPhone or iPad

Quick, what's the ICD-9 code for a malignant neoplasm of connective and other soft tissue, site unspecified? If you said "171.9" you may not need this free app (with advertisements, or you can pony up \$14.99 for the ad-free version). The app puts the entire International Classification of Diseases, Revision 9 in all its prosaic splendor, at your fingertips. It allows searches simultaneously by code, diagnosis, and description, through the entire ICD9-CM, individual categories, or selected nonspecific codes.



Micromedex Drug Information, for Android and iPhone, Pad, or Pod touch

This free app resides locally on your device and therefore does not need internet access. The program gives point-of-care access to a comprehensive list of drug information, including trade and generic names, combinations, adult and pediatric dosages, therapeutic class, black box warnings, and other information typically found on drug package labels. An interesting twist is that this app, unlike some drug references, lists the indicated Food and Drug Administration label uses and the off-label uses.

NCCN Guidelines, for Android and iPhone

The National Comprehensive Cancer Network provides this free app for registered users, giving them access to continually updated, evidence-based clinical guidelines on the diagnosis and treatment of conditions ranging from acute myeloid leukemia to venous thromboembolic disease. The app gives rapid point-of-care access to help in clinical decision making and it checks for guideline changes before loading the latest version onto the device. Instructions for downloading the app can be found at www.nccn.org.

PubMed on Tap, for iPhone and iPad

With this little app costing \$2.99, you can pull research papers out of the ether that is known as PubMed and PubMed Central. It allows searches (including advanced Boolean queries) to find, display, and import reference information and documents in PDF format (for free full text or with authorized access). The program also helps organize the user's references and allows users to e-mail them to themselves or to others.

Smartest Doc, for Android and iPhone

This one is just for fun. . . Test your mettle against those of your colleagues with a 5-question daily quiz (Monday-Friday) delivered to your device. Those with the most correct responses and shortest response times are placed on a Leader Board (but only if you're a registered physician). The winner gets bragging rights. Sorry folks, no CME-credits.