

iNeuroradiology

Websites for Neuroradiologists

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When Apple's iPhone succeeded the iMac and iPod, a colleague of mine jokingly commented that now, it would only be a matter of time until we saw iRIS and iPACS and that we would probably operate our scanners with applications like iCT and iMRI in the near future.

This has not quite come true (yet?), but it is a fact that the large number of available "apps" (short for "applications") has contributed to this particular smartphone's commercial success.

Please note: usually, I don't focus on a specific brand or product in this column. Considering, however, that Apple's iTunes store offers more than 100,000 apps (Google has about 11,000 apps in stock for the Android operating system; both figures from [1]) and that many of these also run on devices like the iPod touch or iPad, it seems justified to look at this particular operating system only.

The question that I address in this article is simple: can neuroradiologists find anything useful or interesting among these 100,000+ applications? Yes, we can!

DICOM Viewers

About 2 years ago, I presented the program *Osirix* (Fig. 1) in the column. *Osirix* is also available in a version for the iPhone (<http://www.osirix-viewer.com/iphone/>). You can download the manual from this website, and there is a video on YouTube that shows the functions [2].

ResolutionMD (Fig. 2) is another viewer (<http://www.calgaryscientific.com/>) that you can install on your iPhone. It is also found on YouTube [3].

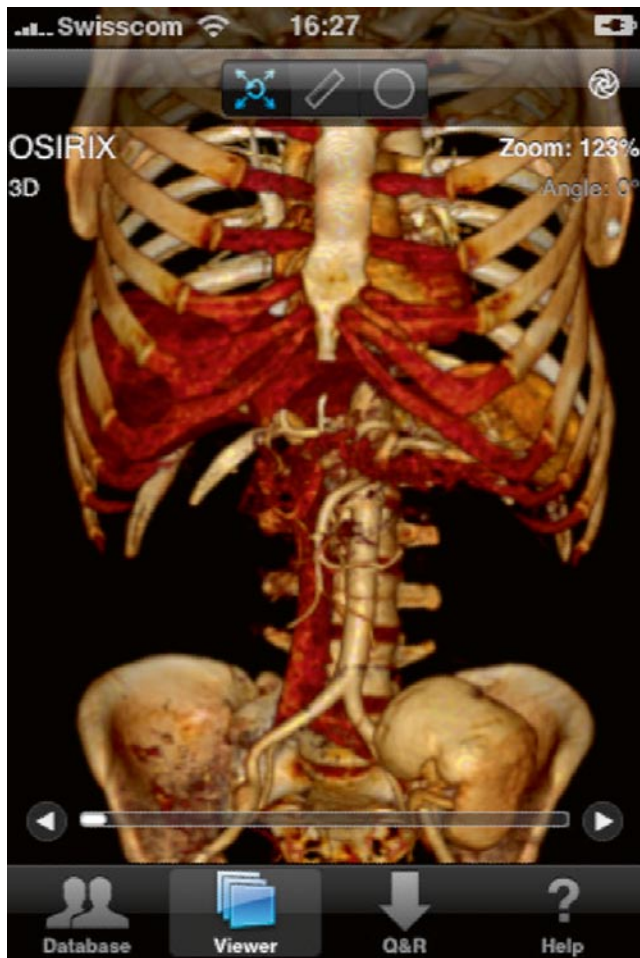
MIMvista (<http://www.mimvista.com/products/iphone>) has an iPhone viewer that is, according to a video of the product presentation [4], even able to perform CT/PET image fusion.

All these programs link to a Mac computer or directly to the institution's PACS (or a dedicated DICOM server) via a WLAN connection. Please note that a mobile phone's screen does, probably in most countries, not comply with the regulations for screens for medical reporting. The *MIMvista* viewer meets the requirements of the European Union's Medical Device Directive [5]; FDA approval in the USA is pending.

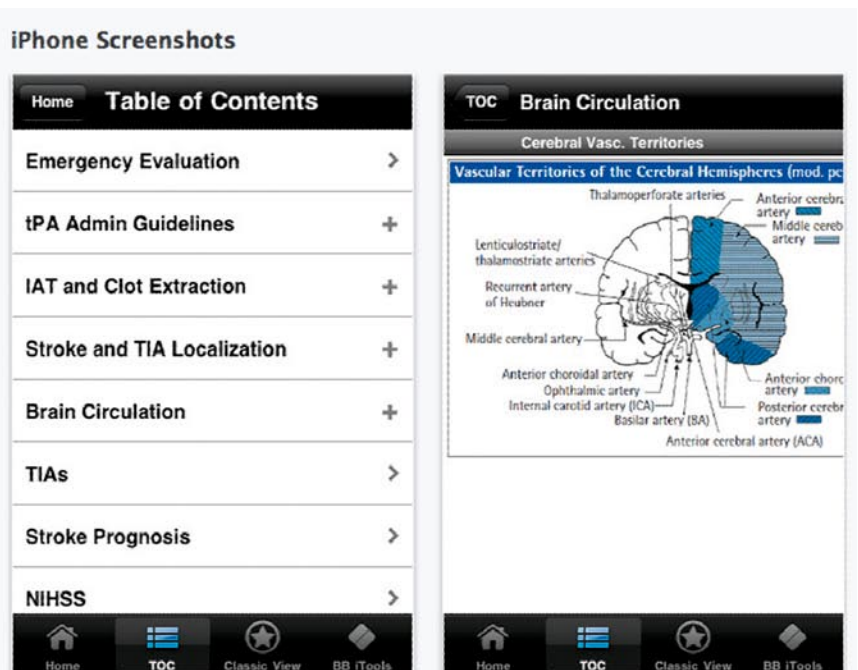
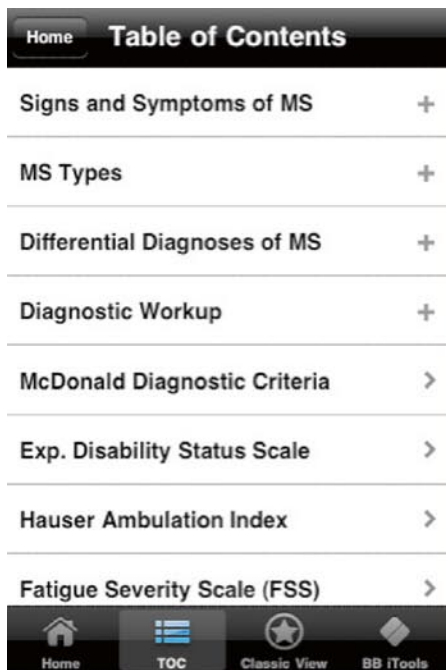
Other Programs

A search for "neuroradiology" in the Apple Store yields no results. There are, however, numerous apps that are interesting as teaching or reference tools. Using search engines, you can find programs like "3D Brain", "Neuroradiology multilingual", or the "i-pocketcards", available, e.g., for multiple sclerosis (Fig. 3) or stroke (Fig. 4 and 5).

Some of these programs are free, some cost a small fee. They are too numerous for a complete overview, but I want to encourage you to search for yourself.



Figs. 1 and 2 Example screenshots from manufacturers' websites: Osirix (1), ResolutionMD (2)



Figs. 3 and 4 Screenshots of the i-pocketcards "Multiple Sclerosis" (3) and "Stroke" (4 screenshot from iTunes store)

iPhone Screenshots

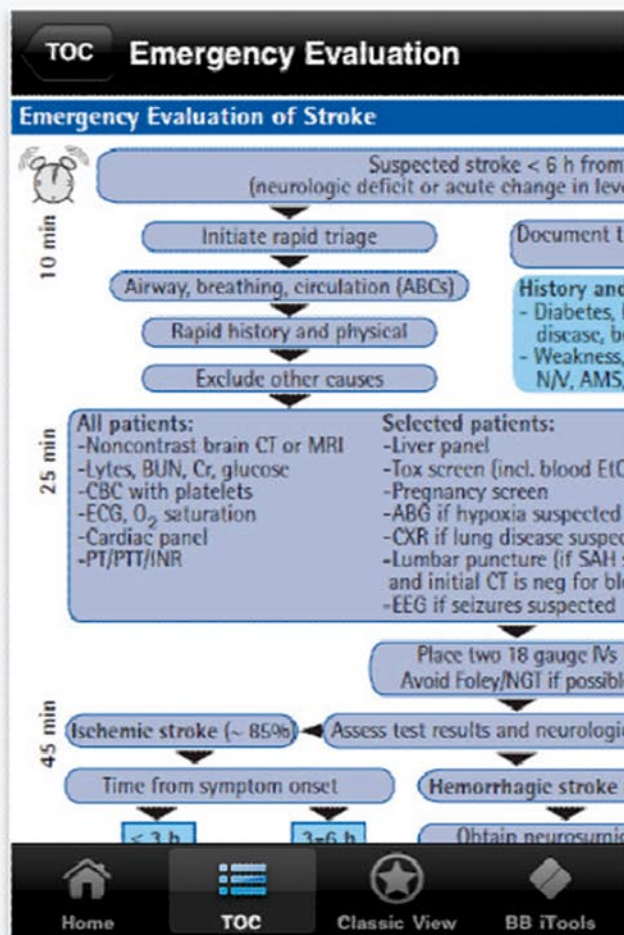
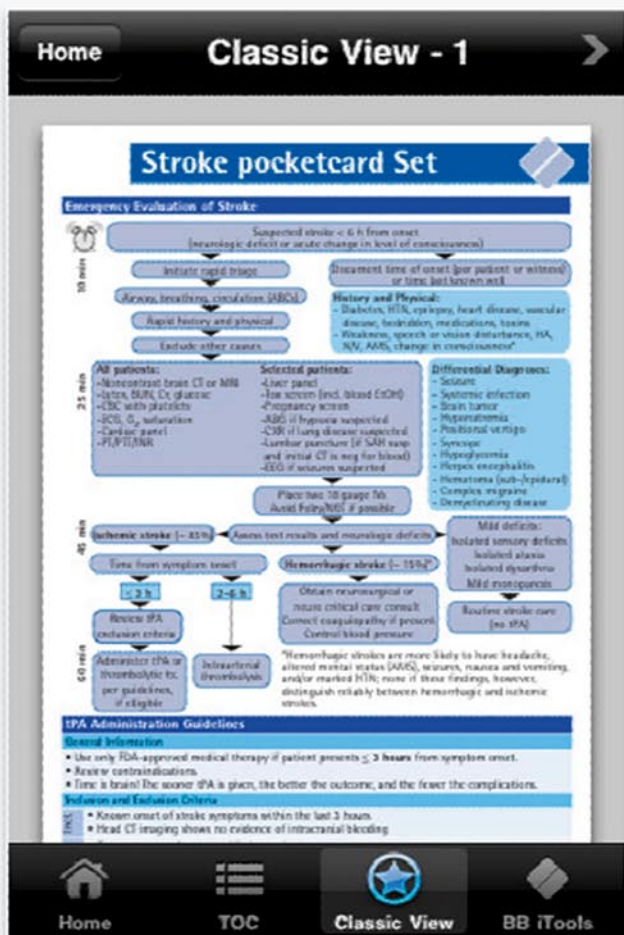


Fig. 5 Screenshot of the “Stroke” (screenshot from iTunes store)

References

1. Chen BX. Apple’s app store hits six digits. How many apps do you need? November 4, 2009. <http://www.wired.com/gadgetlab/2009/11/appstore/>.
2. Osirix on iPhone. <http://www.youtube.com/watch?v=EZ9UCKAZfb4>.
3. ResolutionMD for iPhone. <http://www.youtube.com/watch?v=zDjFNLLahql>.
4. iPhone OS MIMvista app. <http://www.youtube.com/watch?v=13A2Ac5Mpns>.
5. Council Directive 93/42/EEC of 14 June 1993 concerning medical devices.