SECTION EDITOR: BARBARA A. BLODI, MD

Practical Retinal Photography and Digital Imaging Techniques

by Marshall E. Tyler, CRA, FOPS, Patrick J. Saine, MEd, CRA, FOPS, and Timothy J. Bennett, CRA, FOPS, 208 pp, with illus, $59.95, ISBN 0-7506-7371-0, Philadelphia, Pa, Elsevier Science, 2003.

Small in size but big on content, the "little red book," as Marshall Tyler describes it, is filled with essential information every ophthalmic photographer needs to know to take good-quality fundus photographs.

For those of us who teach many of the essential elements of good-quality fundus photography to students working on clinical trials or ophthalmology studies, this book is a welcome reference manual. But its utility doesn't stop there. Not surprisingly, the elements of good-quality study photography are also requirements in everyday clinical photography. We need photographs with good focus and clarity; properly aligned, exposed, and positioned on the correct field; and with adequate stereo effect. This book teaches these basics and will be invaluable to every ophthalmic photographer.

All of the basic photographic "dos" and "don'ts" are covered in the first few chapters of this book. Much like the family minivan, a vehicle containing all the basics and tons of utility, this book contains all of the essential elements for producing good-quality fundus photographs in an easy-to-navigate format. However, it contains additional features with chapters containing lists of resources and sometimes Web sites for additional reading. Ample illustrations, drawings, and fundus photographs help bring the reader up to speed quickly. Bundle all this with 3 feature-packed chapters on digital imaging and this minivan begins to handle like a very capable sports car.

Each year, we are seeing a greater proportion of ophthalmic photography services converting darkrooms to waiting rooms and discarding 35-mm camera backs, replacing them with increasing higher-quality digital camera backs. During the coming years, we will, no doubt, see this trend increase, and we will most probably see the total elimination of film-based images in ophthalmic photography within the next 3 to 5 years. With this certainty, it is becoming increasingly important that we become educated about digital imaging, and this book provides this introduction in a no-nonsense way, containing elements for novice and expert alike.

The last 3 chapters introduce digital imaging starting with an overview of digital imaging basics from pixels to bit depth and image resolution. The reader is given a brief overview of sensor types, area vs linear, and a discussion of the relative advantages and disadvantages of the ever more popular complimentary metal-oxide semiconductor sensors.

But if the reader wants more, the last 2 chapters go into much greater detail covering the 3 elements of digital imaging: image capture, image processing, and image output. Chapters 9 and 10 allow the reader to drive deeper into the details of commercially available digital capture systems: direct capture systems (using various fundus camera systems) and indirect capture systems (using film scanners) to convert film-based images to digital files. The basic image processing tools are described and a summary of different image printing options rounds out the digital imaging sections.

Bennett, Saine, and Tyler have succeeded in adding one more much needed textbook to the sparsely populated library shelves of the ophthalmic photography section. We give them credit for contributing 2 manuals in one compact handbook, marrying a primer on eye anatomy, terminology, and the essential elements of good-quality fundus photography with a primer on digital imaging as it pertains to ophthalmology. Kudos to these 3 authors for this latest work.

Michael Neider, BA
Madison, Wis