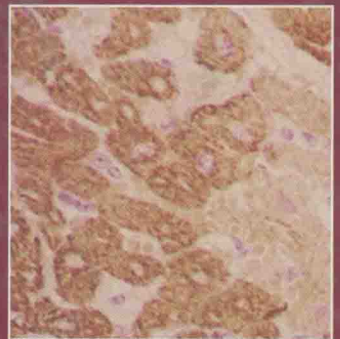
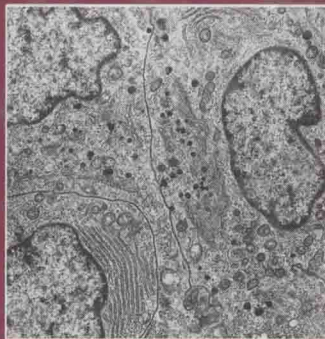
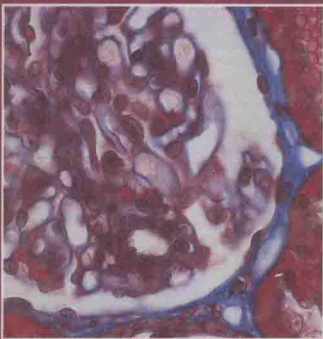
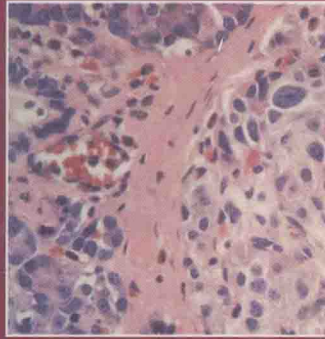
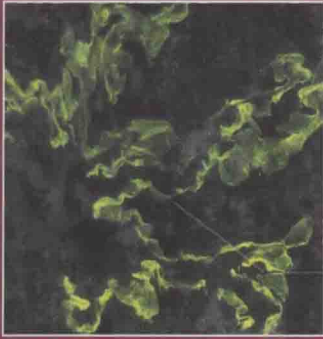
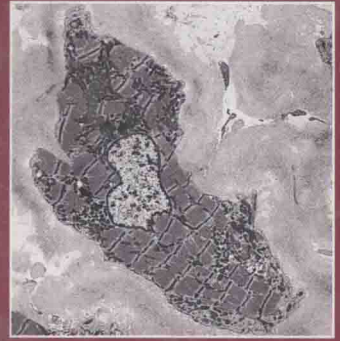
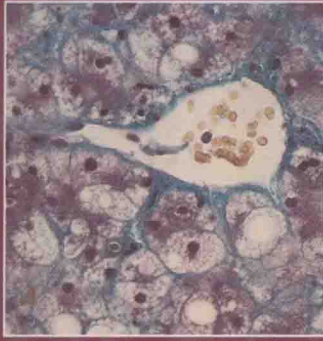


PATHOLOGY



A Color Atlas

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PATHOLOGY

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PREFACE

Four years have passed since the tenth edition of *Anderson's Pathology* was published in 1996. The book reviews in pathology and general medical journals were laudatory. The American Medical Writers Association recognized it from about 3,000 submissions and gave it an Honorable Mention Award. Furthermore, we received numerous informal unsolicited comments, most of which were favorable. Our files contain stories to regale us, (or maybe remind us) that, like Blanche DuBois in *A Streetcar Named Desire*, we often depend on "the kindness of strangers." A resident's comment that *Anderson's* is the most torn up book in their library speaks a million. A friend visiting Indonesia reported that *Anderson's* is one of two pathology books in English in the medical school library in Surabaya, which is a city on the island of Java that most of us cannot even locate on the map or know only from the Kurt Weil's rendition of Bertold Brecht's song about Surabaya Johnny.

By all accounts the book seems to have been a success. The efforts of the two editors and 160 contributors apparently have paid off, and it was almost time to embark on a next edition. At that point we decided to try something new.

We reviewed the pros and cons for a new edition and asked ourselves whether a 4- to 5-year cycle for revisions would be warranted for *Anderson's Pathology*, a text that deals primarily with classical aspects of pathology. After considerable deliberation, we decided to postpone a new edition of the main textbook for at least a year or two and in the meantime try to publish a compact version based primarily on color figures illustrating the main concepts and entities of systemic pathology.

This atlas is the result of such an effort to produce an eclectic iconography of pathology based on not more than 1500 illustrations. To this end, we have culled the best color photographs from the tenth edition of *Anderson's Pathology* and asked the contributors for additional high quality photographs to replace black and white pictures or illustrate

some entities that were not covered adequately in the tenth edition of the textbook. A pictorial compendium was assembled and is presented here as a core textbook for students, residents, and practicing physicians.

We hope that the color pictures in this atlas will help students comprehend all those complex pathological entities that cannot be adequately delineated with words alone. We all need some help in forming our own images from descriptions of various disease, and we hope that our atlas will help some of our younger colleagues in that respect. At the same time, we also hope that even experienced pathologists and clinicians will visit the atlas to refresh their memory of things partially forgotten or blurred through the lens of time. Above all, we hope that this atlas will serve as a bridge between pathologists and clinicians and be a reminder of the classic adage of Sir William Osler that our clinical skill will be only as good as is our understanding of pathology.

This book is a joint effort of more than 160 pathologists from North America and Europe, who with a few exceptions have also contributed to the tenth edition of *Anderson's Pathology*. In addition to our own material, many of us have used slides obtained from colleagues and friends. Although the editors tried to acknowledge all of the contributions, we are sure that some contributors might not have been recognized. We thank these anonymous contributors and also extend our apologies for unintentional omissions of credit wherever such omissions might have occurred.

In the name of all contributors the editors express their gratitude to the publisher. Rebecca Gruliow, Lynne Gery, Carol Sullivan Weis, and Laura DeYoung helped realize this project; however, *Pathology: A Color Atlas* could not have been completed without the incredible dedication of Florence Achenbach. We thank them all.

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A microscopic image of tissue, likely stained with hematoxylin and eosin (H&E), showing cellular structures and nuclei. The image is in grayscale, with the tissue appearing in shades of gray against a dark background. The texture is complex, with various cell shapes and sizes visible.

1

THE HEART

CONGENITAL HEART DISEASE

Congenital heart disease encompasses disorders of the cardiovascular system that result from faulty embryogenesis and are present at birth. The most common cardiac malformations in descending order of frequency are

1. Ventricular septal defect (VSD)
2. Atrial septal defect
3. Pulmonary stenosis
4. Tetralogy of Fallot (including pulmonary atresia)
5. Patent ductal artery (ductus arteriosus)
6. Aortic stenosis
7. Coarctation of the aorta
8. Complete transposition of the great arteries
9. Atrioventricular septal defect
10. Tricuspid atresia
11. Aortic atresia (hypoplastic left ventricular syndrome)
12. Total anomalous pulmonary venous connection
13. Persistent truncal artery (truncus arteriosus)

Cardiovascular Shunts and Septal Defects

Shunts result either from patency of normal fetal structures that fail to close postnatally or from incomplete formation of one or more septa during cardiac embryogenesis. Persistent fetal structures include a patent oval foramen and a patent ductal artery (Fig. 1-1). In contrast, shunts that result from faulty embryogenesis involve defects at the level of the atrial, atrioventricular, ventricular, ventriculoarterial, or aortopulmonary septa (Diagram 1-1).

Atrial septal defects occur at the oval fossa in 85% of cases and are known as *fossa* or *secundum atrial septal defects* (Fig. 1-2). *Ventricular septal defects* involve the membranous part of the septum in 75% to 80% of cases seen at operation or autopsy (Fig. 1-3). *Outlet defects* located beneath the right and left cusps of both semilunar valves account for 5% to 10% of all VSD. *Inlet defects* that involve the inlet septum beneath the septal tricuspid leaflet account for 5% of all VSD. *Defects of the muscular part* of the septum account for only 10% to 20% of cases at operation or autopsy, even though they actually represent the most common form of VSD. Most of them are small and close spontaneously.

Abbreviations used in diagrams and figures

AO	Aorta	PT	Pulmonary trunk
CS	Coronary sinus	RA	Right atrium
ICV	Inferior caval vein	RPA	Right pulmonary artery
LA	Left atrium	RV	Right ventricle
LPA	Left pulmonary artery	SCV	Superior caval vein
LV	Left ventricle		

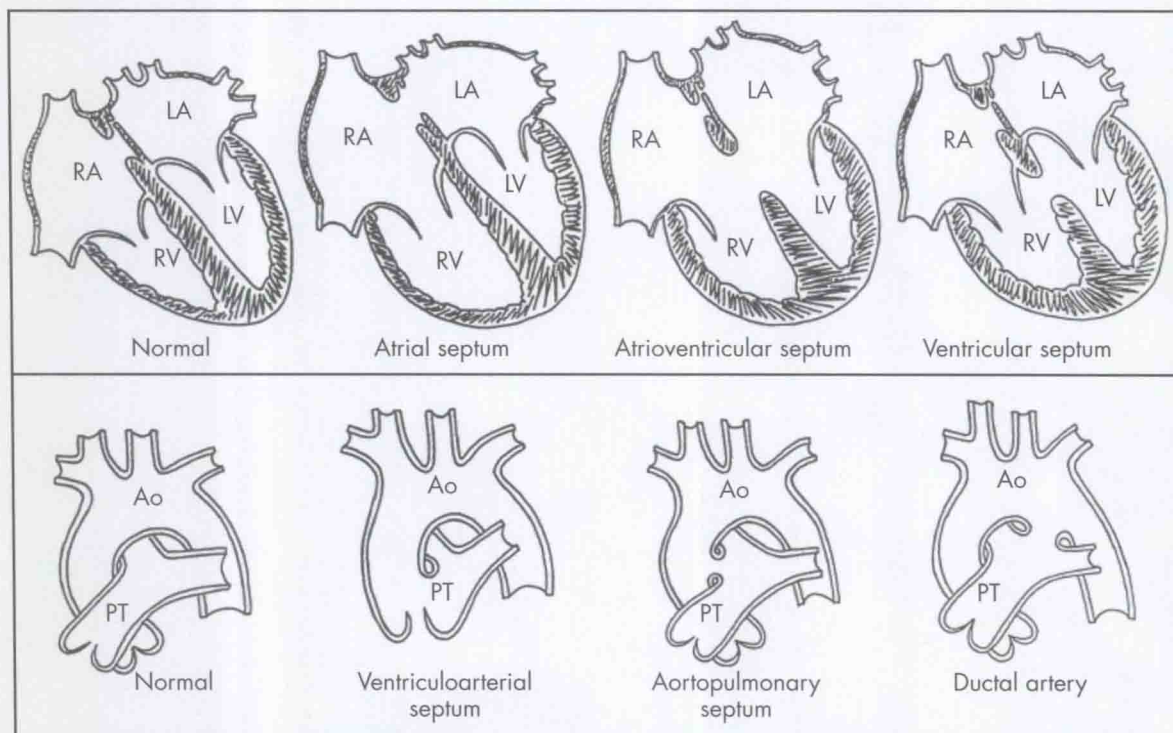


Diagram 1-1. Cardiac and vascular shunts. *Upper panel* shows various levels of intracardiac shunts. *Lower panel* shows various levels of shunts involving the great arteries.