

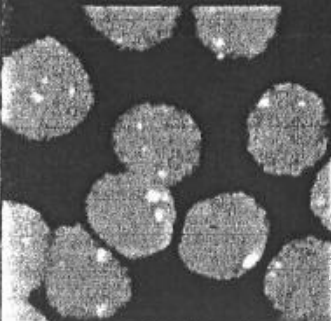
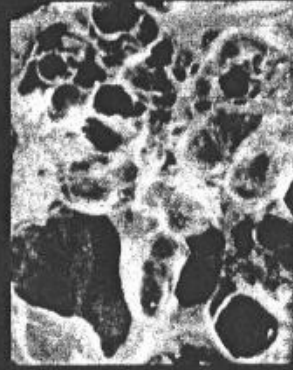
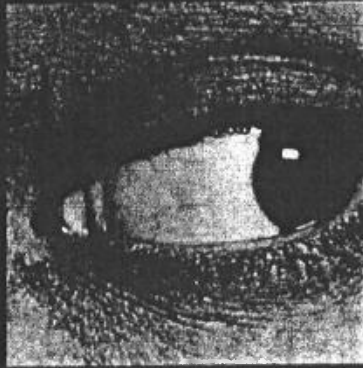
World Health Organization Classification of Tumours



Pathology & Genetics

Tumours of Endocrine Organs

Edited by Ronald A. DeLellis, Ricardo V. Lloyd, Philipp U. Heitz, Charis Eng



World Health Organization Classification of Tumours

WHO



OMS

International Agency for Research on Cancer (IARC)

Pathology and Genetics of Tumours of Endocrine Organs

Edited by

Ronald A. DeLellis

Ricardo V. Lloyd

Philipp U. Heitz

Charis Eng

IARCPress

Lyon, 2004

World Health Organization Classification of Tumours

Series Editors Paul Kleihues, M.D.
Leslie H. Sobin, M.D.

Pathology and Genetics of Tumours of Endocrine Organs

Editors Ronald A. DeLellis, M.D.
Ricardo V. Lloyd, M.D.
Philipp U. Heitz, M.D.
Charis Eng, M.D., Ph.D.

Coordinating Editors Wojciech Biernat, M.D.
Janice Sych, Ph.D.

LC Control Number



2005 384617

Editorial Assistants Isabelle Forcier
Voichita Meyronein
Agnès Meneghel

Layout Vanessa Meister
Marlen Grassinger
Sibylle Söring

Illustrations Thomas Odin

Printed by Team Rush
69603 Villeurbanne, France

Publisher IARC Press
International Agency for
Research on Cancer (IARC)
69008 Lyon, France



This volume was produced in collaboration with the

International Academy of Pathology (IAP)

The WHO Classification of Tumours of Endocrine Organs
presented in this book reflects the views of a Working Group that
convened for an Editorial and Consensus Conference in Lyon, France,
April 23-26, 2003

Members of the Working Group are indicated
in the List of Contributors on page 263

Published by IARC Press, International Agency for Research on Cancer,
150 cours Albert Thomas, F-69008 Lyon, France

© International Agency for Research on Cancer, 2004

Publications of the World Health Organization enjoy copyright protection in
accordance with the provisions of Protocol 2 of the Universal Copyright Convention.
All rights reserved.

The International Agency for Research on Cancer welcomes
requests for permission to reproduce or translate its publications, in part or in full.
Requests for permission to reproduce figures or charts from this publication should be directed to
the respective contributor (see section Source of Charts and Photographs).

The designations used and the presentation of the material in this publication do not imply the
expression of any opinion whatsoever on the part of the Secretariat of the
World Health Organization concerning the legal status of any country, territory, city,
or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

The mention of specific companies or of certain manufacturers' products does not imply
that they are endorsed or recommended by the World Health Organization in preference to others
of a similar nature that are not mentioned. Errors and omissions excepted,
the names of proprietary products are distinguished by initial capital letters.

The authors alone are responsible for the views expressed in this publication.

Enquiries should be addressed to the
Communications Unit, International Agency for Research on Cancer, 69008 Lyon, France,
which will provide the latest information on any changes made to the text and plans for new editions.

Format for bibliographic citations:

DeLellis R.A., Lloyd R.V., Heitz P.U., Eng C. (Eds.): World Health Organization
Classification of Tumours. Pathology and Genetics of Tumours of Endocrine Organs.
IARC Press: Lyon 2004

IARC Library Cataloguing in Publication Data

Pathology and genetics of tumours of endocrine organs /
editors R.A. DeLellis... [et al.]

(World Health Organization classification of tumours ; 8)

1. Pituitary gland neoplasms - genetics
 2. Pituitary gland neoplasms - pathology
 3. Thyroid neoplasms - genetics
 4. Thyroid neoplasms - pathology
 5. Endocrine pancreas neoplasms - genetics
 6. Endocrine pancreas neoplasms - pathology
 7. Adrenal neoplasms - genetics
 8. Adrenal neoplasms - pathology
- I. DeLellis Ronald A. II. Series

ISBN 92 832 2416 7 (NLM Classification: WJ 160)

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.