



University of Texas - Houston Medical School
Department of Pathology and Laboratory Medicine

AN IMAGE DATABASE FOR ARCHIVED PRESENTATION CASES

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Traditional ways of storing images

- Kodachromes
- Prints & negatives
- Glass slides





Internet Image Database: Development

- ❑ Implementation of a centralized database
- ❑ Aim of the software to: (a) enable users to store digital images and text & manipulate the images; (b) to access the archive at later date
- ❑ Provide internet access to mixed text/image database and integrate it in the departmental website



DPALM

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 **University of Texas - Houston Medical School**
Department of Pathology and Laboratory Medicine

[January 2001 Departmental Newsletter - Under the Scope now online](#)

The goal of the Department of Pathology and Laboratory Medicine (DPALM) is to combine the traditional values of academic pathology (excellence in service, teaching and research) with innovative approaches to the new challenges of medicine and science in order to become one of the elite departments that define a model of excellence in the changing world of medicine.

DPALM is part of the Medical School of the University of Texas-Houston Health Sciences Center. It is located within the Texas Medical Center which is the largest medical center in the world consisting of 39 not-for-profit medical institutions.

DPALM consists of 38 full time faculty as well as part time, joint and volunteer faculty in addition to support staff, 22 residents and 15 graduate students in fully accredited programs.

[Learn more about our department.](#)

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Education and Training

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The department's outstanding, fully accredited residency program offers 26 positions for combined anatomic/clinical pathology training at PG levels 1 through 5. Residents in anatomic and clinical pathology work in the Hermann, Hermann Children' and LBJ hospitals as well as on rotations with the Harris County Medical Examiner, [St. Lukes Episcopal Hospital](#), and the [M.D. Anderson Cancer Center](#). DPALM sponsors a program in molecular pathology jointly with pathologists at the M.D. Anderson Cancer Center. Training in medical informatics is coordinated through the [Department of Health Informatics](#) whose chair, Dr. Smith, is a pathologist. The Department also sponsors an extensive web based continuing education program, [MEDiC](#). Hermann Hospital is part of the Memorial-Hermann Healthcare System which is a not-for-profit system consisting of 10 hospitals in metropolitan Houston.

Local intranet

Start | [Dishant.Com - Lis...](#) | [dgupta on 'dpalm...](#) | [Microsoft PowerP...](#) | [Dishant.Com - Pla...](#) | [UTH DPALM ...](#) | 11:56 AM

Address <http://hawk.uth.tmc.edu/CPCases/CPCaseBrowseCases.asp> GoLinks [Customize Links](#) [Free Hotmail](#) [Windows](#) [RealPlayer](#)
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Browsing all the Archived CP Cases

Note: Click on any Case Number to get a full record for that case

Case Number	Diagnosis
0001	Pneumocystis carinii in BAL fluid
0002	Mucormycosis in blood vessel
0004	Cryptosporidium in stool
0005	Histoplasma in brain abscess- PAS
0006	Histoplasma in brain abscess- GMS
0007	Babesiosis
0008	HIV bone marrow
0008-1	Mastocytosis
0008-2	Mastocytosis-higher magnification
0008-3	Mastocytosis-Giemsa
0009-1	Anaplastic large cell lymphoma
0009-2	Anaplastic large cell lymphoma-CD30
0009-3	Anaplastic large cell lymphoma-Bone marrow
0010	Megaloblastic changes
0011	India ink for Cryptococcus
0012-1	Cryptococcus in bone marrow
0012-2	Cryptococcus in bone marrow
0013-1	Plasmodium Vivax
0013-2	Plasmodium Vivax
0014	Pneumococcal infection
0015	AML M3, Hypogranular Variant
0016	Hereditary spherocytosis
0018	AML - hypercellular bone marrow

<http://hawk.uth.tmc.edu/CPCases/CPCaseShowCaseNumber.asp?CaseNumber=0001>

Internet



Case Number: 0001

Image Location: PathImage/0001.jpg

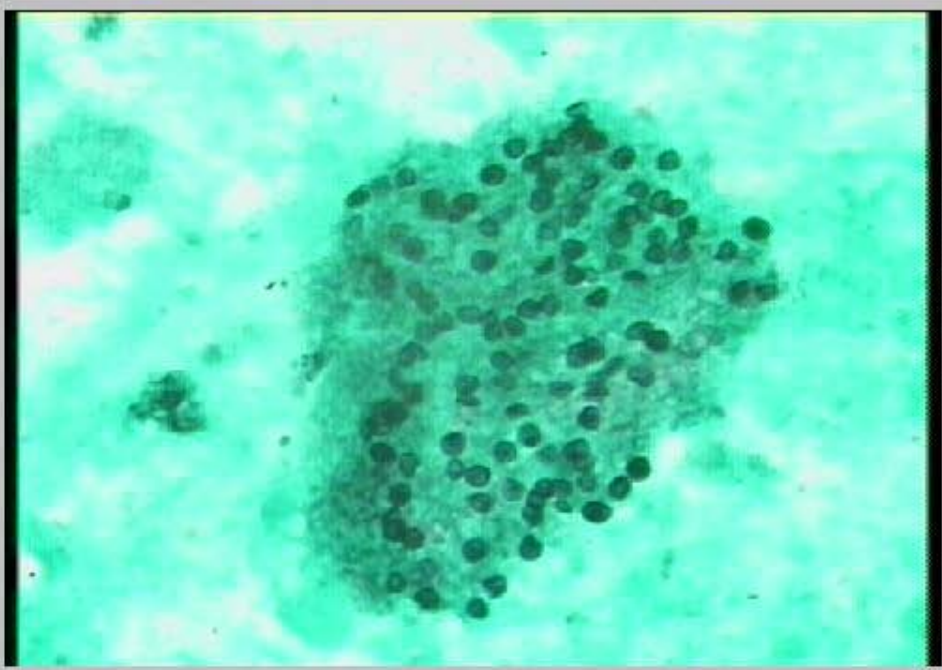
Diagnosis: *Pneumocystis carinii* in BAL fluid

Additional Data: 48/F. HIV positive. Multiple cysts of *Pneumocystis carinii* within fluffy alveolar casts.

SNOMED Code:

Author: Deepali Gupta

Date: 9/20/2000



Case Number: H-95-207

Image Location: PathImage/H-95-207.jpg

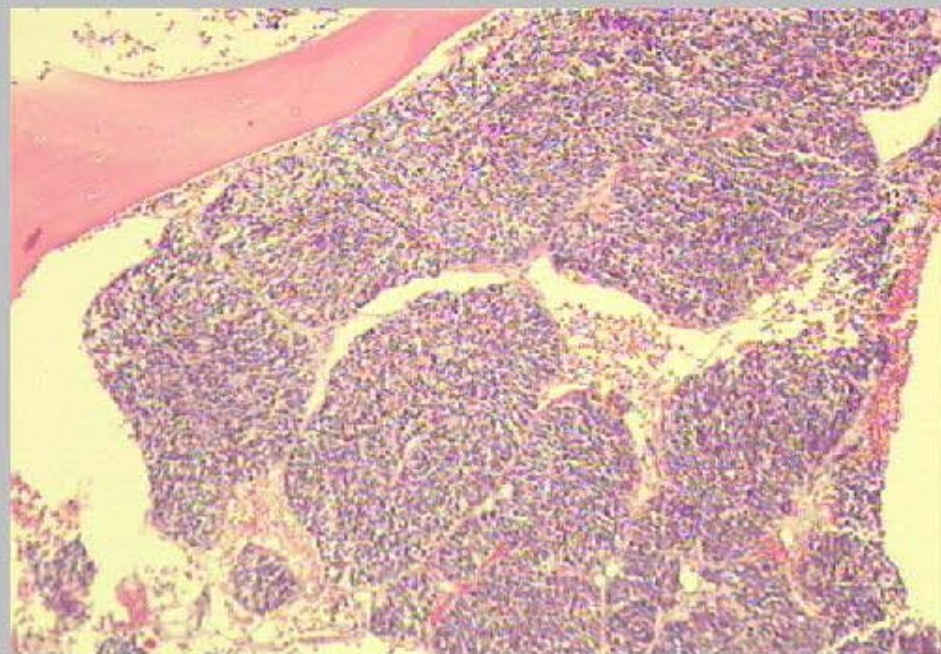
Diagnosis: **Metastatic small cell carcinoma**

Additional Data: 54 year male with lesion at carina on CT scan. Bone marrow was done for thrombocytopenia. The biopsy shows metastatic carcinoma in large sheets and nests, lacking glandular or squamous differentiation.

SNOMED Code:

Author: **Deepali Gupta**

Date: **10/3/2000**



Case Number: 3044

Image Location: PathImage/3044.jpg

Diagnosis: **Hereditary elliptocytosis**

Additional Data: A finding of more than 20% elliptocytes in the peripheral blood is seen in clinically, genetically and morphologically heterogenous group of hereditary elliptocytosis.

SNOMED Code:

Author: **Deepali Gupta**

Date: **9/20/2000**



Case Number: 2060

Image Location: PathImage/2060.jpg

Diagnosis: AML-M3

Additional Data: multiple Auer-rods evident

SNOMED Code:

Author: Sang Wu

Date: 12/21/00



File Edit View Favorites Tools Help



Address http://hawk.uth.tmc.edu/CPCases/CPCaseFindDX.asp

Links Customize Links Free Hotmail Windows RealPlayer



CP Cases: Find Cases with a given Diagnosis

Enter a key word then click the "Find" button:

Diagnosis:

[Archived CP Cases Home Page](#)

CP Cases: Find Cases with a given Diagnosis

The following matches were found:

(To view full image, put cursor on thumb-nail image, click the right mouse button and choose View Image)

Case Number: **4074**

Image Location: **PathImage/4074.jpg**

Diagnosis: **Hodgkin's Lymphoma**

Additional Data: **22 Year Male with Hodgkin's disease Stage IV. The biopsy is hypercellular and is diffusely infiltrated by Hodgkin's disease. The infiltrate is comprised of Reed Sternberg cells, eosinophils, plasma cells and lymphocytes. There is diffuse increase in fibro-connective tissue.**

SNOMED Code:

Presenter(s): **Deepali Gupta**

Conference Date: **9/19/2000**



Case Number: **2070**

Image Location: **PathImage/2070-1.jpg**

Diagnosis: **Burkitt's Lymphoma**

Additional Data: **The bone marrow aspirate shows several lymphoma cells. The cells have coarse nuclear chromatin, 1-3 nucleoli, and deeply basophilic cytoplasm containing several sharply defined clear vacoules. The morphology and immunophenotype of small non-cleaved lymphoma is identical to ALL-L3.**

SNOMED Code:

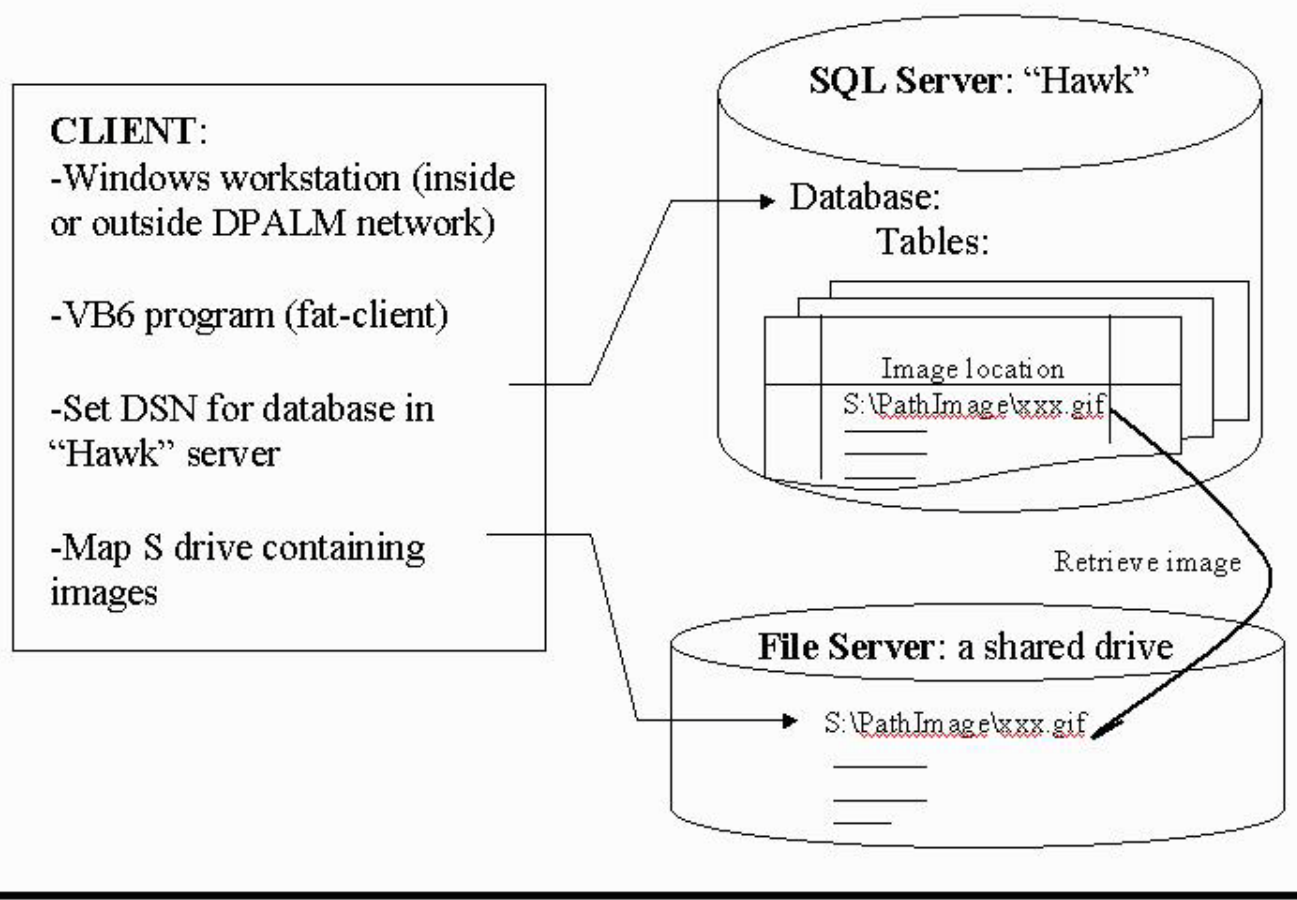


Structure

- Client-server module
 - MS SQL Server 7
 - File server
- Web-based module
 - Microsoft internet information server

- Diagram Showing the Client-Server Setup for the Management Module:

Client-Server Setup for Image Files of CP Cases



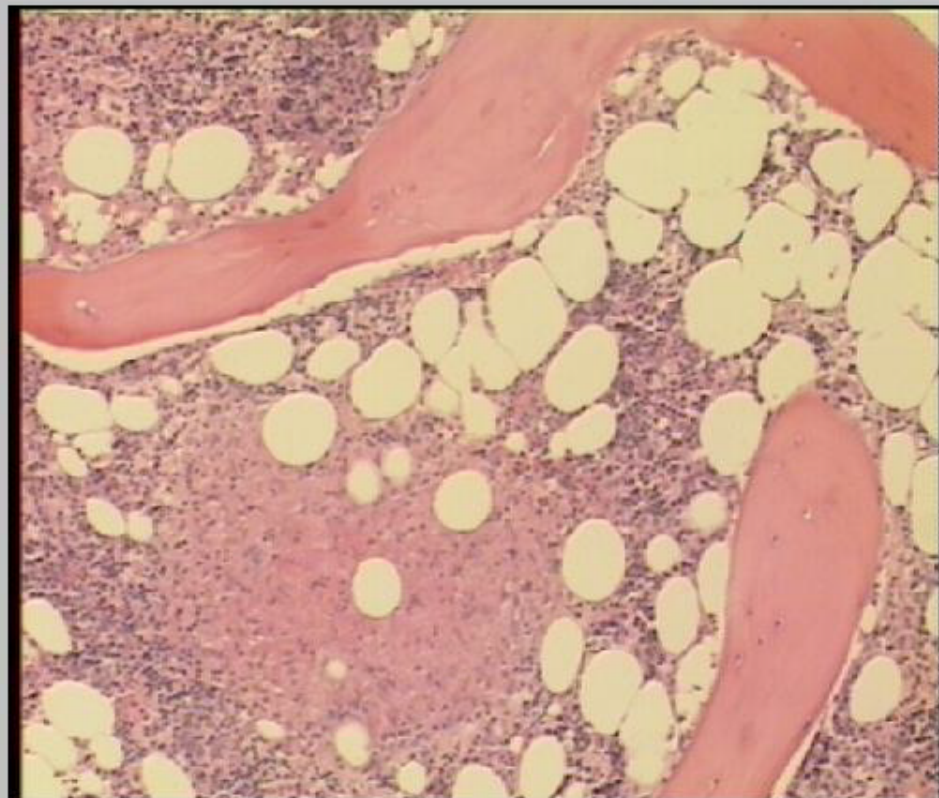
CP Cases

Case Number: Image Location: Diagnosis:

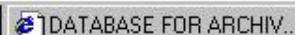
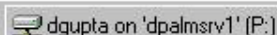
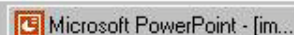
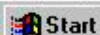
Additional data: 51/M. HIV and HCV pos., chest X ray: miliary TB. Bone marrow is hypercellular for age (80%). Multiple necrotising granulomas are present. The AFB stain was positive. GMS was negative.

SNOMED: Author: Date: 

Double-click on folder to open image files in Explorer



Record: 9



1:12 PM



Sources of cases

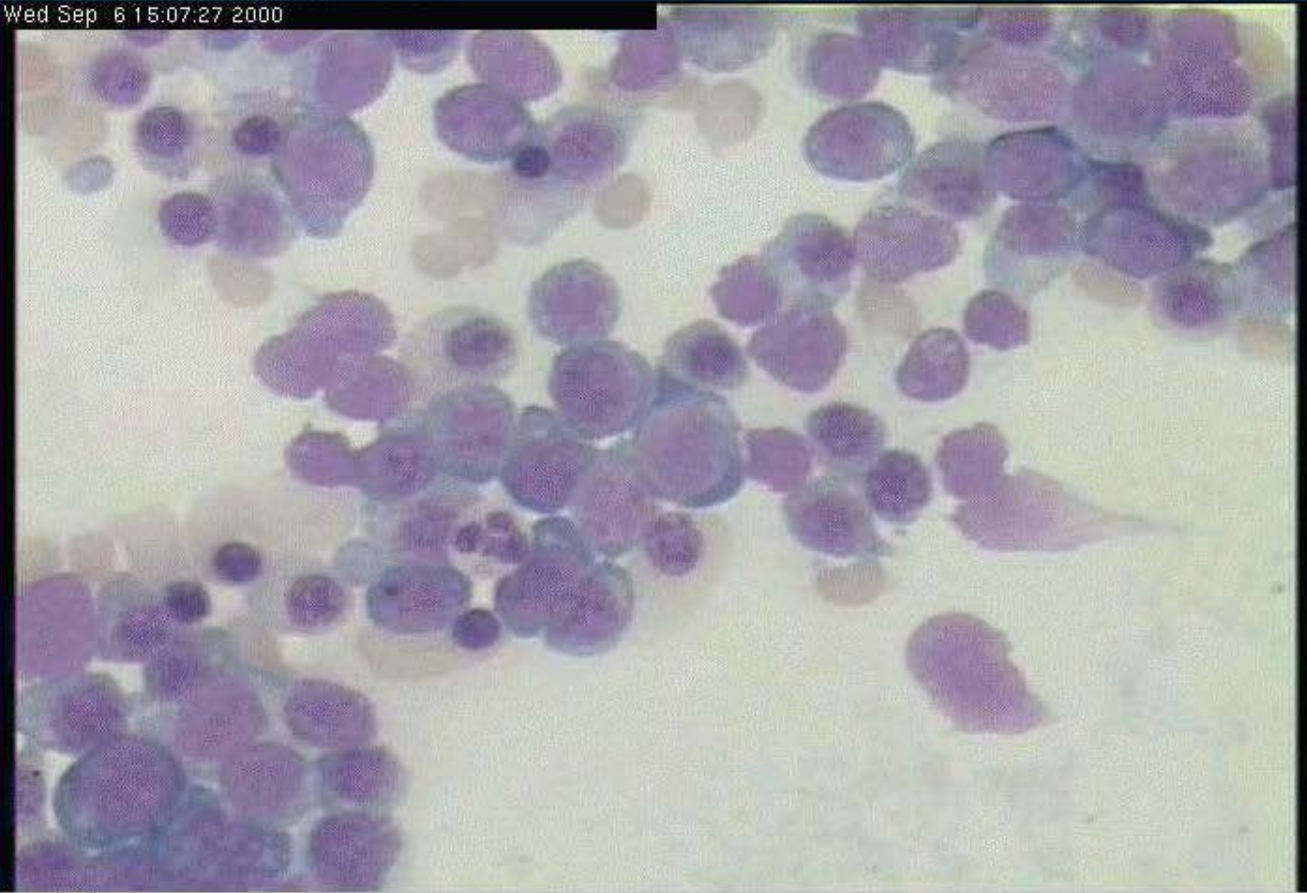
- Study sets
- Interesting cases during sign-out
- Telepathology conference
 between LBJ & Hermann Hospital
 twice weekly

Move message to folder:

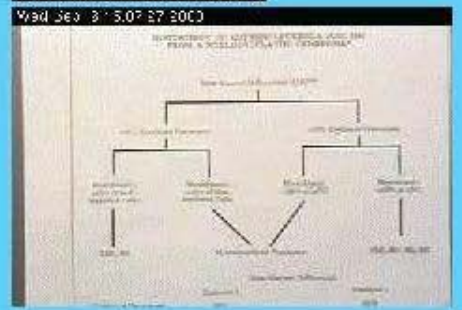
UTH Pathology Conference Cameras
[Return to camera selection](#)

Does not work with Internet Explorer use Netscape.
 Click any small image to enlarge
[HELP](#)

LBJ Signout ScopeCam [Get a still image](#)
 Wed Sep 6 15:07:27 2000



LBJ Signout GrossCam



MSB Conf. PeopleCam



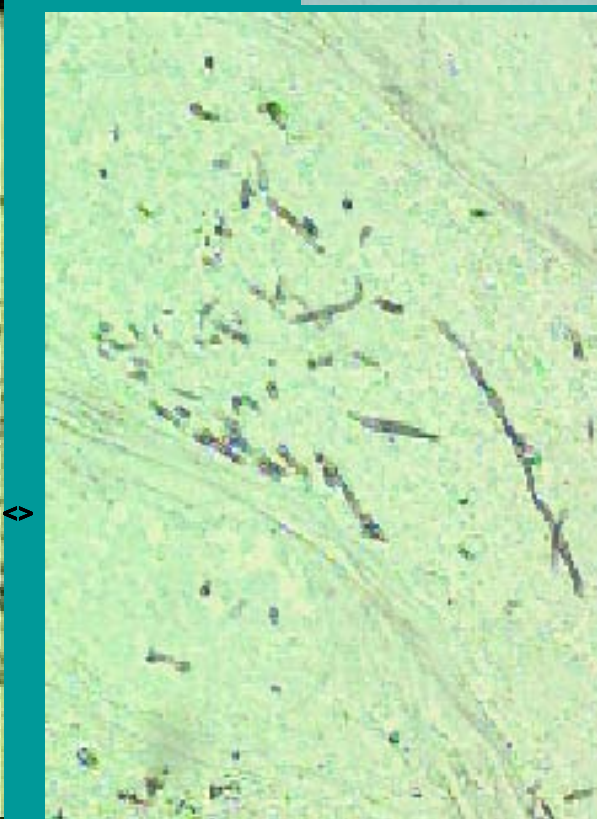
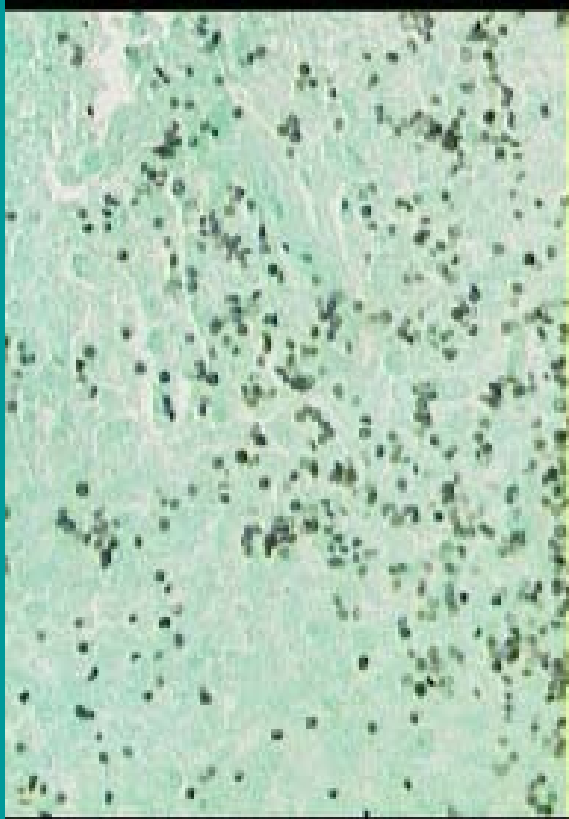
LBJ Signout PeopleCam





Advantages and uses

- Study set material
- Easy storage and retrieval of rare and interesting cases
- Index for study boxes
- Images can be directly downloaded for presentations as examples or publication





Conclusion

- A prototype image database has been successfully designed and implemented for archiving digital images
- The web module of this database allows for access to images using a web browser
- The image database has been used in our department to archive interesting cases & cases from teleconference



Future improvements

- Index the database
- More than one image for each case
- Image quality