

## Father of Pathology

### FATHER OF MODERN PATHOLOGY

The body is a cell state in which every cell is a citizen. Disease is merely the conflict of the citizens of the state brought about by the action of external forces.



**Rudolf Carl Virchow (1821 – 1902)**

*omnis cellula e cellula*-every cell arises from another cell.

A German physician is known as "The Father of modern Pathology" or "The Father of Cellular Pathology" as well as "The Founder of modern Medicine". Virchow was a great doctor, a renowned pathologist, an anthropologist, a prehistorian, a biologist, as well as a writer, editor and a well-known politician of the 19<sup>th</sup> century. He was the pioneer of the modern concept of pathological processes by his application of the "cell theory". He emphasized that diseases arose primarily in individual cells of the tissues. Besides his role as a scientist, he campaigned vigorously for social reforms and contributed to the development of anthropology as a modern science. His work helped to discredit the "theory of Humours" bringing about a scientific basis to medicine. He is also considered as one of the founders of social medicine.

### Medical terms named after virchow.

- Virchow's cell theory: "*Omnis cellula e cellula*"-every living cell comes from another living cell.
- Virchow's angle (Virchow-Holder angle): The angle between the nasobasilar line and the nasosubnasal line.
- Virchow's fifth cardinal sign of inflammation: Functio laesa (loss of function).
- Virchow's cell (lepra cell): A macrophage in Hansen's disease.
- Virchow's corpuscles: Corneal corpuscles.
- Virchow's crystals: Yellow-brown, amber, or orange crystals of hematoidin, frequently observed in extravasated blood in tissues.
- Virchow's degeneration: Amyloidosis.
- Virchow's disease: Leontiasis ossea/acute congenital encephalitis.
- Virchow's gland/Virchow's lymph node (Troisier's sign) the presence of metastatic cancer in a supraclavicular lymph node.
- Virchow-Hassall bodies: Hassall bodies/thymic corpuscles.
- Virchow's Law: Related to craniosynostosis.
- Virchow's line: A line from the root of the nose to the lambda.
- Virchow's metamorphosis: Lipomatosis in the heart & salivary glands.
- Virchow's method of autopsy: A method of autopsy where each organ is taken out one by one.
- Virchow's psammoma: Psammomatous meningiomas.
- Virchow-Robin spaces: Enlarged perivascular spaces that surround blood vessels for a short distance as they enter the brain.
- Virchow-Sockel syndrome: "Bird-headed dwarfism".
- Virchow's triad: The classic factors which precipitate venous thrombus formation: Endothelial dysfunction or injury, hemodynamic changes and hypercoagulability.

### V.R. Khanolkar :

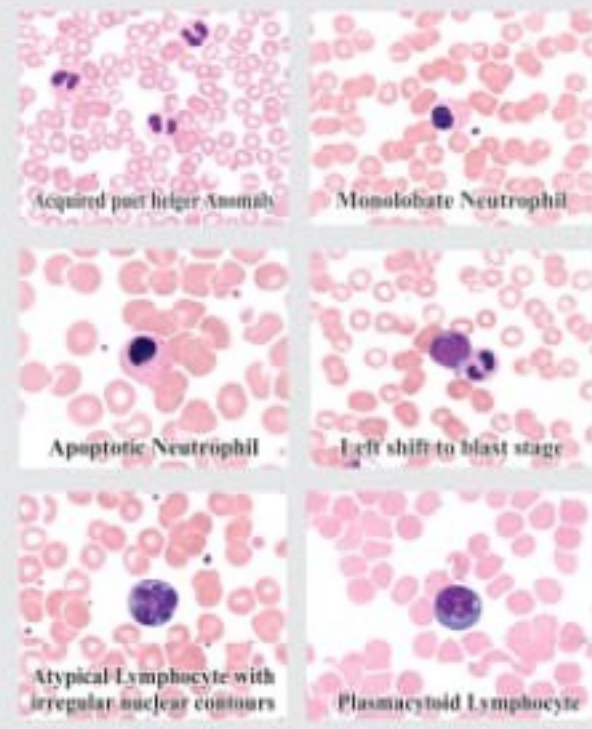
Father of pathology and medical research in India

Founder president of Indian Association of Pathologists



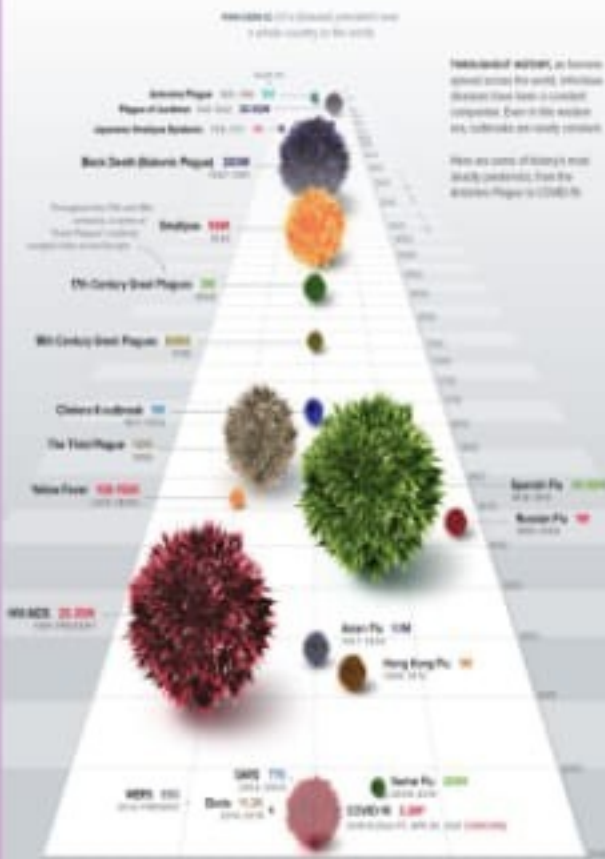
Vasant Ramji Khanolkar (1895 – 1978) was the first pathologist in India. He made major contributions to the epidemiology and understanding of cancer, blood groups, and leprosy. He was the first to show the existence of dhobi cancers, and was among the earliest to demonstrate the carcinogenicity of tobacco and the use of needle aspiration cytology for the diagnosis of neoplasms. He was an acclaimed teacher and was on the boards of numerous international organizations. He was a bibliophile and his writings are Oslerian in style (Patient-based not problem-based learning: An Oslerian approach to clinical skills, looking back to move forward). He serves as a role model to the few in India who are aware of him. He deserves to be called the "Father of Pathology and Medical Research in India."

## MORPHOLOGICAL FINDINGS IN PERIPHERAL SMEAR IN COVID-19



### LEARN FROM HISTORY TO CURB PANDEMICS

In nature life exists in 2 forms INVISIBLE form (Virus, Bacteria, Fungi, Parasites) and VISIBLE forms (Plant kingdom and Animal kingdom) including humans and include beneficial plus harmful organisms. We have no choice but to live together all the time with them. In the past millions of people died due to lack of knowledge but human beings are very intelligent and they can meet the challenges of harmful organisms provided they take lessons from the "History of Pandemics"



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Shri Shankaracharya Institute Of Medical Sciences , Bhilai

## DEPARTMENT OF PATHOLOGY SSIMS PATHOLOGY BULLETIN BIMONTHLY NEWS LETTER



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### CHIEF EDITOR'S MESSAGE

**Dr. Shailendra Tamaskar**  
Professor & HOD  
Department of Pathology  
SSIMS, Bhilai , Chhattisgarh.  
Member and International fellow of  
College of American Pathologist

### Dear Friends

Wish you all a very happy, joyful and safe 2021.

It gives me immense pleasure to reach out to all of you in my capacity as Chief Editor on this First issue of "Patho Bulletin" 2021

This bulletin is a bimonthly professional magazine of Department of Pathology, SSIMS. We cater to the interest of our diverse readership from UG/PG medical students to junior and senior consultants, provoking discussion and comments on topics that range across the specialities.

We are a bit late to start this bulletin due to Covid 19, but better late than never. We expected this year we will get respite from the corona menace but instead we had the second wave of the pandemic much devastating than the last year's sufferings. Our Institute had a very tough time dealing with the situation. Our many faculty members and paramedical staff were infected with Covid 19 and with the grace of god all are safe. We are proud to be the frontline worker in the diagnosis of corona and now the corona is showing a decreasing trend. Vaccination has also started since January and this has increased the hope that normalcy is about to be restored soon. However, we are coming across the murmur of the third wave of covid in due course of time, but nevertheless, we are well equipped with the experience and knowledge of the past two waves, the situation will be handled effectively, we are ready for it.

Let's talk of the good news of our Institute which energised us- we had a successful NMC inspection for clinical PG seats in Orthopaedics, Radiology and Dermatology. We have smoothly conducted the UG recognition final MBBS university examination, NMC recognition inspection successfully. The first batch of interns joined for their internship in clinical departments. A new batch of MBBS students has joined and now the institute is full of energy like the chirping of birds on the tree.

In the meantime, online organization of teaching programs continued as it was going on from the last year and also internal assessment tests for the medical students. We are delighted to have five Post Graduate students in our department. We are conducting seminars along with slide seminars covering clinical topics on regular basis for our postgraduate students. We are diagnosing interesting and challenging cases in Haematology, Cytology and Histopathology with a wide range of rare cases in today's routine practice and we do it with team effort. We have started Bone Marrow Aspiration in our department

We had successfully organized a workshop on Fluid Cytology CAPCON on 16<sup>th</sup> November 2019. Moving one step further we are now planning for conferences in a hybrid mode. The organization of conferences in a hybrid pattern appears to be a better option now rather than only physical or digital. All members should attend these lectures and encourage postgraduates to attend this. Now we are preparing for NABL accreditation.

I wish you all safe and sound 2021.

### Know your faculty



**Dr. Rajendra Kumar Chandrakar**  
Professor  
Central Clinical Laboratory Incharge  
Department of Pathology  
SSIMS, Bhilai , Chhattisgarh.

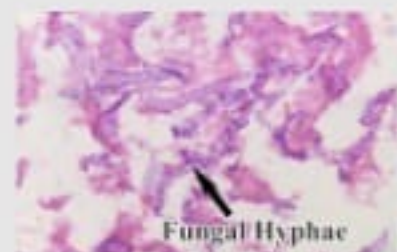
Completed his MBBS and MD Pathology from the prestigious Government Medical College, Jabalpur , Madhya Pradesh in 1986. He worked as consultant pathologist in Riyadh, Saudi Arabia from 1987 to 1997. He has long-standing experience of more than 38 years with published 4 National Journals. He has attended many National and International Conferences.

### CASE 1

43 years male patient Post Covid presented with complaints of diminished vision and headache for 12-15 days, swelling over left side of face for one month and polypoidal mass in ethmoid and sphenoid sinus.

Provisional Diagnosis -? Fungal / Rhinosporidiosis.

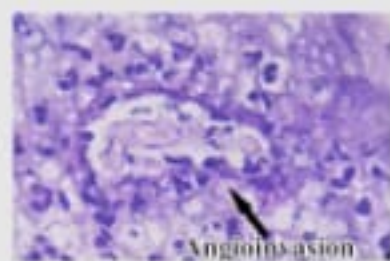
On Microscopic Examination – Presence of wide, aseptate, branched fungal hyphae and spores with angioinvasion. Impression – Features are suggestive of **Mucormycosis**



H&E Stain

Fungal Hyphae

PAS Stain



Angioinvasion

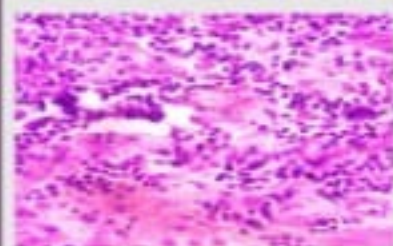
### CASE 2

52 years male patient presented with complaint of pain in abdomen. Endoscopic findings revealed Chronic gastric ulcer, moderate gastritis and malignant ulcer.

Gross – Subtotal Gastrectomy specimen shows an ulcerated area 4x3x1.2 cm on the body of stomach.

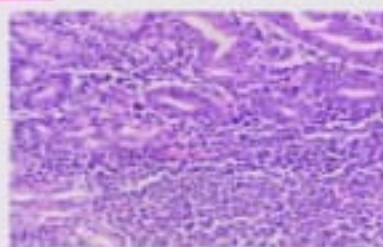
Microscopic examination findings showed simultaneous presentation of **Gastric Lymphoma (Non Hodgkin Lymphoma)** with **Moderately Differentiated Adenocarcinoma**.

SSIMS/HP/21/1133



Gastric Lymphoma

Adenocarcinoma



## Department Of Pathology



Faculties and Post Graduate students



Camera Mounted Microscope and Monitor



Penta Head Microscope



Departmental Library



Museum

## CAPCON 2019 HIGHLIGHTS



Chairman, Shri I P Mishra addressing the gathering after inauguration



Dr. S. Sharma presenting Memento to Speaker

### Blood Bank

"Spare only 15 minutes and save lives"



Blood Donation Area



Blood Component Separation Area



Fresh Frozen Plasma Refrigerator

### Our Working Zone



Histopathology Lab



Cytology Lab and FNAC procedure room



Hematology Lab

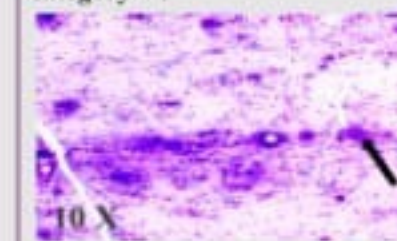


HPLC Machine

To detect various Hemoglobinopathies and HBAIC

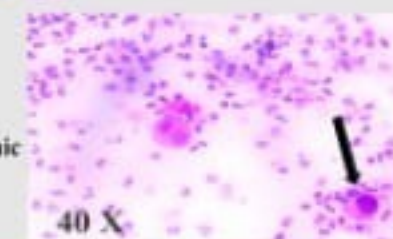
### CASE 3

64 years female patient presented with complaint of diffuse neck swelling since three months, 6x3cm in size, hard in consistency and tender, for which she was advised for fine needle aspiration cytology procedure. CECT findings suggestive of benign multiple colloid nodules with cystic changes. On Microscopic Examination - FNAC findings are suggestive of **Anaplastic Carcinoma of Thyroid**. Bethesda category VI



10 X

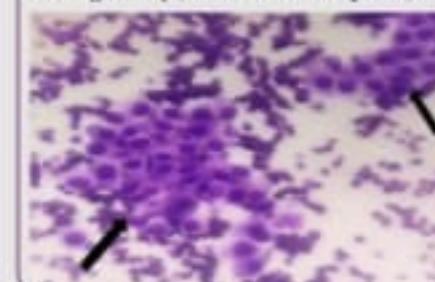
Large, pleomorphic bizarre cells



40 X

### CASE 4

40 years female patient presented with complaints of left sided neck swelling 2.5x2.5cm in size, firm, non mobile and non tender. HRCT Chest findings revealed multiple nodular lesions in bilateral lung parenchyma with mediastinal lymphadenopathy. She was advised for FNAC procedure. on Microscopy Examination – Features are **Positive for Malignancy (Metastatic Deposit) – Primary from Lung**.



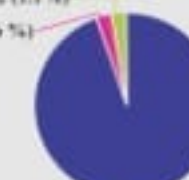
Large, pleomorphic cells, eccentric nuclei, granular nuclear chromatin with prominent nucleoli

### Statistical Data

TOTAL NUMBER OF CASES FORM JANUARY TO DECEMBER 2020  
DEPARTMENT OF PATHOLOGY, SSIMS

Histopathology : 2562 (1.1%)

Cytology : 3587 (1.6%)



Hematology : 218244 (97.3%)

Hematology Cytology Histopathology

TOTAL NUMBER OF MALIGNANCY CASES FROM JANUARY TO DECEMBER 2020, DEPARTMENT OF PATHOLOGY, SSIMS

Hematology : 18 (7%)

Cytology : 35 (24.3%)

Histopathology : 97 (68.3%)

Hematology Cytology Histopathology

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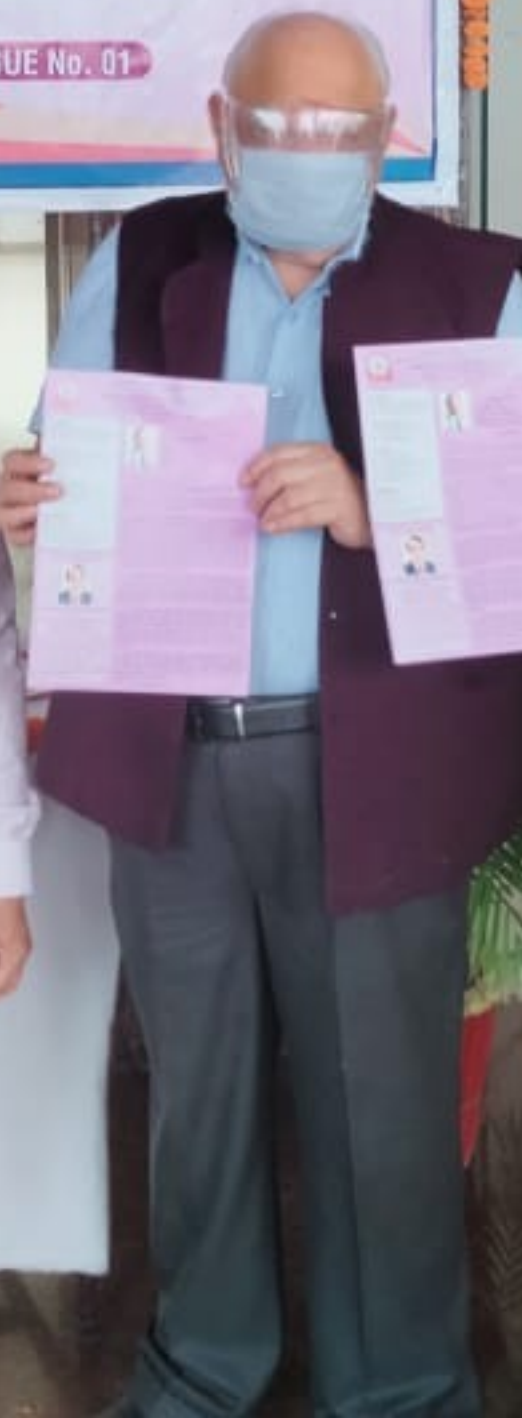
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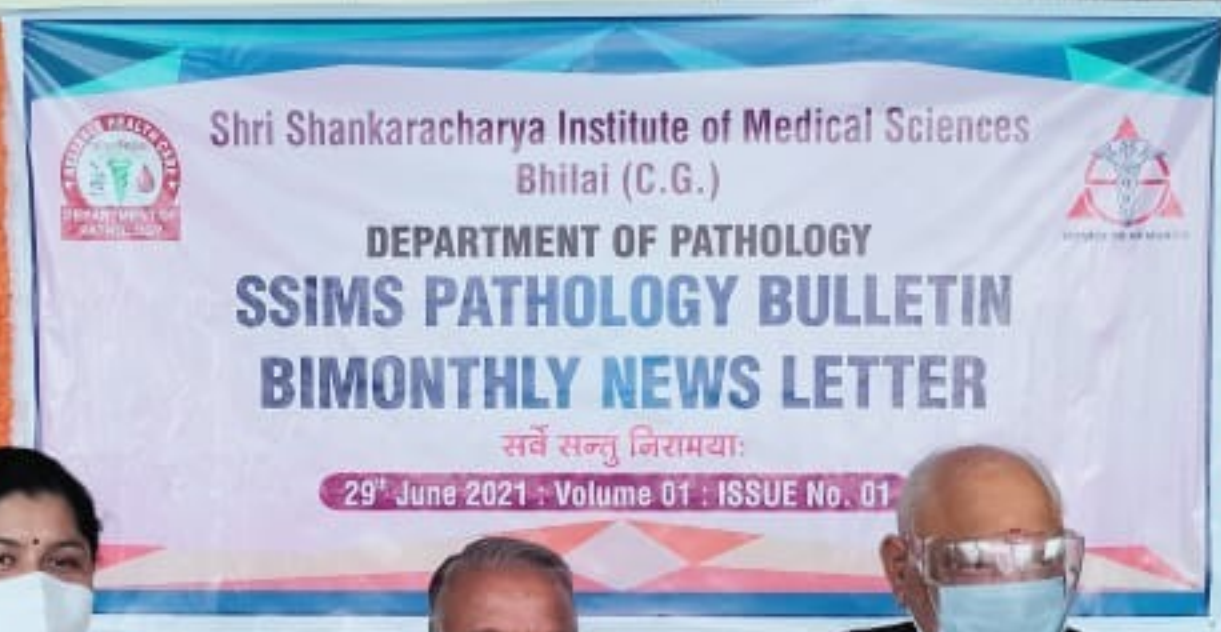
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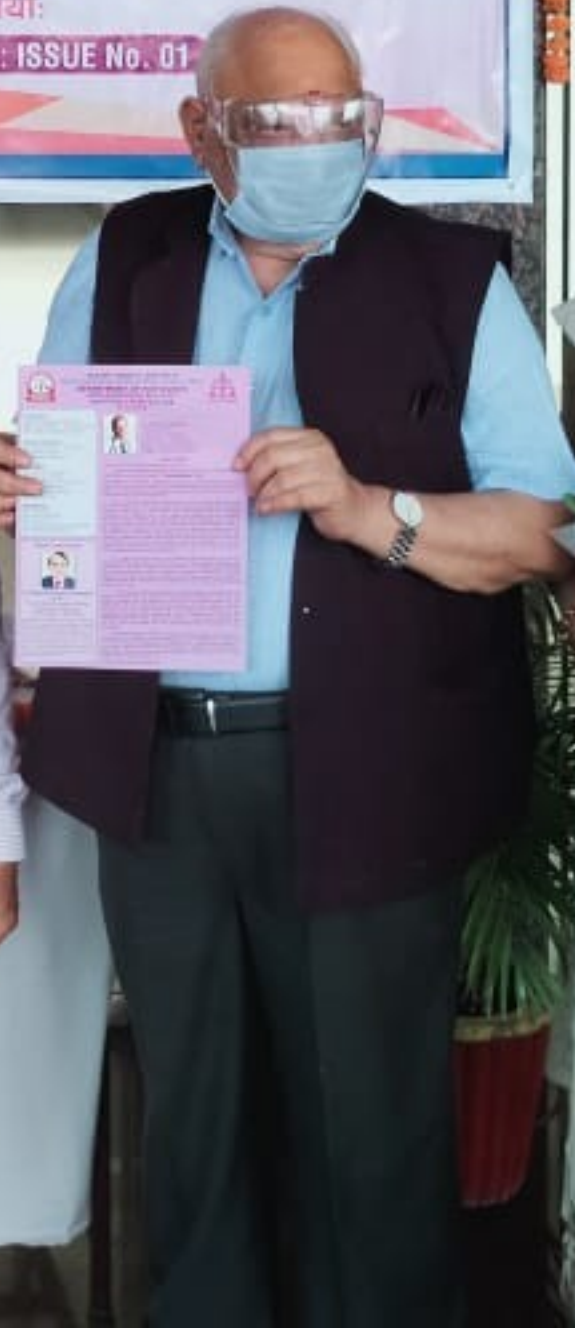
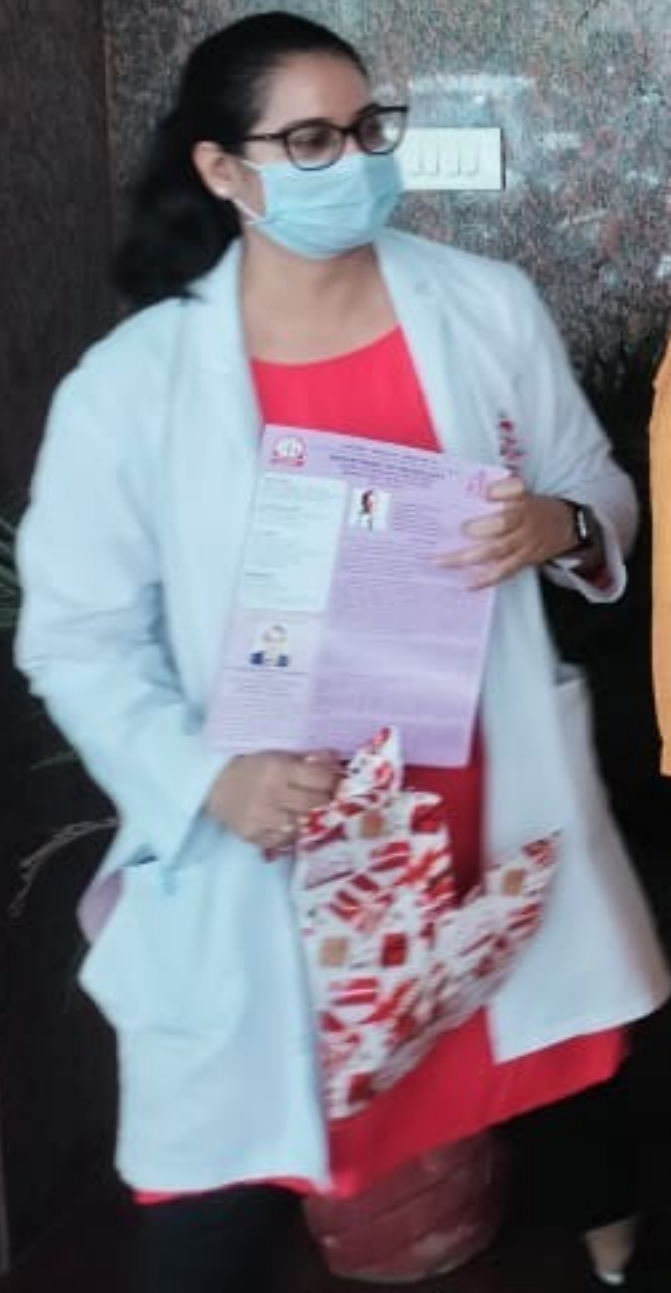
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