

## 7.2 Best Practices

<b>S. No.</b>	<b>Particulars</b>	<b>Page no.</b>
1	Best Practice 1 - Body Donation Program	3-33
2	Best Practice 2 - AI Based Software for Xray (CXR)	34-45

## Best Practice 1 - Body Donation Program

<b>S. No.</b>	<b>Particulars</b>	<b>Page no.</b>
1	Body donation awareness program by Dept. of Anatomy Essay	3-4
2	Reports of Body donation awareness programs conducted	5-11
3	List of Body Donors	12-14
4	Photographs taken while offering certificates to relatives	15-17
5	Certificates issued to relatives of body donors	18-33

# Best Practice 1 - Body Donation Program

## **Department of Anatomy**



**N.K.P. Salve Institute of Medical Sciences & Research Centre and  
Lata Mangeshkar Hospital**  
Digdoh Hills, Hingna Road, Nagpur – 440 019

Phone (07104) 665000,244291, Fax:(07104) 306111- mail: [nkpsims1@rediffmail.com](mailto:nkpsims1@rediffmail.com)/website : [www.nkpsims.in](http://www.nkpsims.in)

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**Department of Anatomy**

**Title of the practice:**Body Donation Program

**Aim:**Aim of the program is to create awareness among general population about whole body donation for the purpose of medical education and research.

**Objectives of the Practice:**

1. To help relatives of body donor to fulfil the last wish
2. To arrange vehicle to receive donor at the earliest and embalm it.
3. To provide cadavers for dissection and for Cadaveric workshop.
4. To conduct research on cadavers
5. To prepare specimens for Anatomy Museum

**The Context:**The institute is located in rural part of Nagpur. People in surrounding region are not much aware about body donation. First MBBS students learn anatomy and dissection is the integral part of studying anatomy. More than a book cadavers teach them. They are the silent mentors and first teacher of the students. During covid 19 there was a shortage of cadavers. Hence the body donation awareness program was started so that we can offer better learning environment to the students.

**The Practice:** The motivation of public for body donation is the first step in body donation awareness program. We conducted awareness program in rural and urban areas and distributed body donation forms. Two NGO's joined hands with us. We provide donor card to the people who submit the body donation form of the institute. After death, we provide free ambulance service 24X7 to the relatives of body donor. Application from close relatives, Death certificate of diseased, Aadhar card of donor and relatives are required at the time of donation. Certificates are given to the relatives. Thanks giving program is arranged after body donation.

**Evidence of Success:** Body donation awareness program started from September 2021. Within a period of 15 months, we received 15 body donations.

**Problems encountered and resources required:** Initially arranging people for the awareness program was difficult but with the help of NGO's we could manage it.

Resources required – Vehicle, LCD Projector, Screen, Body donation forms, Banners and Mike system.



Body donation & Organ donation  
awareness programs conducted by  
Dept. of Anatomy

Body donation awareness program for  
Non- teaching staff at LMH  
28-9-21



**N.K.P. Salve Institute of Medical Sciences & Research Centre and  
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No. NKP SIMS & RC and LMH/ Anat / 181 /2021

Date : 30<sup>th</sup> Sept. 2021

## **Department of Anatomy**

### **Report on “Body Donation Awareness Program”**

Department of Anatomy organized a ‘Body Donation Awareness Program’ for non teaching staff on Tuesday 28/09/2021 from 2-3 pm in Anatomy department. One clerk / technician from each department was deputed. It was attended by 20 staff members.

Dr. D. P. Onkar, Professor & HOD conducted the session & participants were sensitized about the body donation. Body donation is the highest level of charity & it is a true altruism. Due respect should be given to the donors. Current scenario and the need for body donation was discussed. Queries from the participants were solved.



*Dr. Deepali Onkar*  
**DR. DEEPA LI ONKAR**  
PROFESSOR & HOD

Department of Anatomy  
N.K.P. Salve Institute of Medical  
Sciences & Research Centre and  
Lata Mangeshkar Hospital, Nagpur

*Kishu*

**DEAN**  
N.K.P. Salve Institute  
Of Med. Sciences & RC  
and LMH, NAGPUR

**BODY DONATION  
PUBLIC AWARENESS PROGRAM AT  
ISSASANI 29-6-22**



**N.K.P. Salve Institute of Medical Sciences & Research Centre and  
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NKPSIMS & RC and LMH/Anat./ 114 /2022

Date: 30 /06/2022

**DEPARTMENT OF ANATOMY**

**Report**

Department of Anatomy organised Body Donation Awareness Program for general public on 29/06/2022 at Gram Panchayat, Isasani village. Mr. Vishwajit Paikrao co-ordinated the event. Dr. Anant Fulse gave brief introduction about the program. Dr. Deepali Onkar HOD Anatomy described the need and the purpose of body donation in detail. 25 participants attended the program.



Body Donation Awareness Program at Gram Panchayat, Isasanis  
on 29<sup>th</sup> June 2022 by Dept. of Anatomy

*Deepali Onkar*  
**DR. DEEPA LI ONKAR**  
PROFESSOR & HOD  
Department of Anatomy  
N.K.P. Salve Institute of Medical  
Sciences & Research Centre and  
Lata Mangeshkar Hospital, Nagpur

*Kishu*  
**DEAN**  
N.K.P. Salve Institute  
Of Med. Sciences & RC  
and LMH, NAGPUR

Body donation & Organ donation  
Public awareness program  
Wadi-18-8-22



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NKPSIMS & RC and LMH/Anat./ 154 /2022

Date: 18 /08/2022

**DEPARTMENT OF ANATOMY**

**Report on Body Donation and Organ Donation awareness program**

Department of Anatomy, NKP Salve Institute of Medical Sciences & Research Centre, and Lata Mangeshkar Hospital, Nagpur organized Body Donation and Organ Donation Awareness Program for general public on 11/8/2022 from 1PM to 4 PM at Pradhnyasheel Buddha Vihar, Mandpe Layout, Wadi, Nagpur.

Dr. D.P. Onkar described the need of body donation through power point presentation and stressed that more & more people should make a will of body donation for the purpose of Medical Education & Research. Dr. Sushil Meshram, a social worker from Seva Dal Women College was chief guest for the function. He explained about organ and tissue donation through examples.

Thirty participants attended the program. Twenty people pledged for body donation after the program and submitted the forms. All the departmental staff members attended the program. Mr. Suresh Uike, social worker and Dr. R.N. Dehankar, Professor Anatomy coordinated the program.



*Dr. Deepali Onkar*  
**DR. DEEPAALI ONKAR**  
PROFESSOR & HOD  
Department of Anatomy  
N.K.P. Salve Institute of Medical  
Sciences & Research Centre and  
Lata Mangeshkar Hospital, Nagpur

*Dr. R.N. Dehankar*  
**DEAN**  
**N.K.P. Salve Institute**  
**Of Med. Sciences & RC**  
**and LMH, NAGPUR**

# LIST OF THE BODY DONERS





**N.K.P. Salve Institute of Medical Sciences & Research Centre and  
Lata Mangeshkar Hospital**  
Digdoh Hills, Hingna Road, Nagpur – 440 019

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**DEPARTMENT OF ANATOMY**

**LIST OF THE DONORS, WHO HAVE DONATED THEIR BODY FOR MEDICAL EDUCATION AND RESEARCH**

SR.NO.	Date of Receiving Body	Name of Person & Address	Age & Sex (M/F)
1	11/11/ 2021	Mrs. Pikholabai Shamrao Taywade Laxminarayan Nagar Mahajanwadi, Wanadongri, Nagpur	84Yrs, Female
2	09/06/ 2022	Mrs. Padma Subramanian 136, poonam vihar- 1, Indraprastha layout, Swawlambi Nagar, Nagpur -440022	79Yrs, Female
3	13/06/ 2022	Mrs. Kausalya Sambaji Sayare R/o Dwarka nagari,Anandwan square, Anandwan,Warora, Chandrapur-442914	88Yrs, Female
4	25/06/ 2022	Mrs. Sawitribai Durgadasji Rakshak R/o Gali No. 15, Gurudeo Kiranabhandar, near Anjani Police Station, Vishwakarma nagar, Nagpur	85Yrs, Female
5	06/08/ 2022	Mr.Ravindra Wagle R/o B-1 Bhima Apartment Arohi Bharat nagar, Behind Ambazari police station Amravati Road, Nagpur	87Yrs, Male
6	12/08/ 2022	Mrs. Sushilabai Shashikant Bhalgat R/o Main Road, Vallabh Bhai Patel Ward, Bhandara – 441904	70Yrs, Female
7	23/08/2022	Mrs. Panchfula Vishwas Tale R/o Dipori Wadgaon Rajdi, Amravati, Maharashtra, 444709	73Yrs, Female
8	02/09/2022	Mrs. Smita Vinayak Kanetkar R/o Plot No. 7, Bhaskar Apts, Bajaj Nagar, Nagpur, Maharashtra, 440010	83Yrs, Female
9	19/09/2022	Mr. Viddyadhar Sharatchandra Ranade R/o Plot No. 172, Dhanlaxmi apartment, Near Chhatrapati Sabhagruh, Chhatrapati Nagar, Nagpur, Maharashtra, 440015	90Yrs, Male
10	08/10/ 2022	Smt. Suman Ganpatrao Shende R/o. 40 Ladikar layout, Manewada Road, Nagpur - 24	80 Yrs, Female
11	10/10/2022	Mrs. Vanlata Arun Huddar R/o. Plot No. 120 Shubhangi Layout, Khamla Road, Near Raut Hospital, Pande Layout, Khamla, Khamla, Nagpur - 440025	84Yrs, Female



12	13/10/2022	Mrs. Nalini Manohar Kanetkar <u>R/o. Plot No. 90 Behind Joshi Chakki, Swawalambi Nagar, Ranapratap Nagar, Nagpur – 440022</u>	92Yrs, Female
13	30/10/2022	Mrs. Sumitra Kaliram Gaikwad <u>C/o. Kaliram Kashiram Gaikwad, Behind Tahsil Office, Bardi, Armori, District - Gadchiroli – 441208</u>	62Yrs, Female
14	18/11/2022	Smt. Susheela Manikrao Dhanpalwar R/o. 3-4 -1013/19, Rajendra Colony, Barkatpura Himayathnagar, Station Kachiguda, Hyderabad, Telangana – 500027 C/o. Shrikant Manikrao Dhanpalwar, R/o. 204 Kuber Regency, Congress Nagar, Patwardhan Ground, Nagpur. Maharashtra – 440012.	84Yrs, Female
15	19/12/2022	Ku. Lata Mahadeo Patil R/o. Near Buddha Putla, Galli No. 1, Kunjilal Peth, Bhagwan Nagar, Nagpur- 440027. Maharashtra	64Yrs, Female

*Dr. Deepali P. Onkar*

Dr. Deepali P. Onkar  
Professor & HOD Anatomy  
NKP SIMS & RC and LMH,  
Nagpur


PHOTOGRAPHS TAKEN WHILE OFFERING  
CERTIFICATE TO RELATIVES OF BODY DONERS



**H.K.P. Sahu Institute of Medical Sciences & Research Centre & Lata Mangeshkar Hospital Nagpur**

**VISION**  
To provide world class medical services and to be a leading medical institution in the region and to be a center of excellence in medical education and research.

**MISSION**  
• To provide world class medical services and to be a leading medical institution in the region and to be a center of excellence in medical education and research.  
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 GPS Map Camera



Lata  
Hosp

Google

**Nagpur, Maharashtra, India**  
**4222+FPQ, Police Nagar, Nagpur, Maharashtra 440016, India**  
**Lat 21.101351°**  
**Long 79.001802°**  
**23/08/22 11:17 PM**





Apple Maps

**Nagpur, MH, India**

Digdoh Hills, Nagpur, 440016, MH, India

Lat 21.101347, Long 79.001899

10/08/2022 10:23 PM GMT+05:30



GPS Map Camera

## Certificates issued to relatives of body donors



**N.K.P. Salve Institute of Medical Sciences & Research Centre and  
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Digdoh Hills, Hingna Road, Nagpur – 440 019

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**DEPARTMENT OF ANATOMY**

No. NKP SIMS/ Anat./ Cert./ 15 /2021

Date: 11/11/ 2021

**CERTIFICATE**

Govt. of Maharashtra by its notification No. MED-190/3589/MED-4(A) dated 01.08.1990 has declared this institution as an approved institution for the purpose of Anatomical Act.

This department has received donated body (cadaver) of Mrs. Pikholabai Shamrao Taywade, Aged 84Yrs Female, Laxminarayan Nagar Mahajanwadi, Wanadongri, Nagpur - on 11/11/ 2021, along with the Death Certificate.

**THIS DONATED BODY (CADAVER) WILL BE USED FOR TEACHING PURPOSES.**

**DR. DEEPALI P.ONKAR**  
**HOD. DEPT. OF ANATOMY**  
**DR. DEEPALI ONKAR**  
PROFESSOR & HOD  
Department of Anatomy  
N.K.P. Salve Institute of Medical  
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**DEPARTMENT OF ANATOMY**

No. NKP SIMS/ Anat./ Cert./ **50** /2022

Date: 09/06/ 2022

**CERTIFICATE**

Govt. of Maharashtra by its notification No. MED-190/3589/MED-4(A) dated 01.08.1990 has declared this institution as an approved institution for the purpose of Anatomical Act.

This department has received donated body (cadaver) of Mrs. Padma Subramanian Aged 79Yrs, Female, 136, poonam vihar- 1, Indraprastha layout, Swawlambi Nagar, Nagpur -440022, on 08/06/ 2022, along with the Death Certificate.

**THIS DONATED BODY (CADAVER) WILL BE USED FOR TEACHING PURPOSES.**

*Dr. Deepali P. Onkar*  
**DR. DEEPALI P. ONKAR**  
**PROFESSOR & HOD.**  
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**DEPARTMENT OF ANATOMY**

No. NKP SIMS/ Anat./ Cert./ 16 /2022


Date: 13/06/ 2022

**CERTIFICATE**

Govt. of Maharashtra by its notification No. MED-190/3589/MED-4(A) dated 01.08.1990 has declared this institution as an approved institution for the purpose of Anatomical Act.

This department has received donated body (cadaver) of Mrs. Kausalya Sambaji Sayare, Aged 88Yrs, Female, R/o Dwarka nagari, Anandwan square, Anandwan, Warora, Chandrapur-442914, on 13/06/ 2022, along with the Death Certificate.

**THIS DONATED BODY (CADAVER) WILL BE USED FOR TEACHING PURPOSES.**

  
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No. NKP SIMS/ Anat./ Cert./ 17 /2022

Date: 25/06/ 2022

**DEPARTMENT OF ANATOMY**

**CERTIFICATE**

Govt. of Maharashtra by its notification No. MED-190/3589/MED-4(A) dated 01.08.1990 has declared this institution as an approved institution for the purpose of Anatomical Act.

This department has received donated body (cadaver) of Mrs. Sawitribai Durgadasji Rakshak, Aged 85Yrs, Female, R/o Gali No. 15, Gurudeo Kiranabhandar, near Anjani Police Station, Vishwakarma nagar, Nagpur, on 25/06/ 2022, along with the Death Certificate.

**THIS DONATED BODY (CADAVER) WILL BE USED FOR TEACHING PURPOSES.**

*Dr. Deepali P. Onkar*

**DR. DEEPALI P. ONKAR**  
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**DEPARTMENT OF ANATOMY**

No. NKP SIMS/ Anat./ Cert./ 51 /2022

Date: 06/08/ 2022

**CERTIFICATE**

Govt. of Maharashtra by its notification No. MED-190/3589/MED-4(A) dated 01.08.1990 has declared this institution as an approved institution for the purpose of Anatomical Act.

This department has received donated body (cadaver) of Mr.Ravindra Wagle, Aged 87Yrs, Male, R/o B-1 Bhima Apartment Arohi Bharat nagar, Behind Ambazari police station Amravati Road, Nagpur – 33, on 06/08/ 2022, along with the Death Certificate.

**THIS DONATED BODY (CADAVER) WILL BE USED FOR TEACHING PURPOSES.**

*Dr. Deepali P. Onkar*

**DR. DEEPAI P. ONKAR**  
**PROFESSOR & HOD.**  
**DEPT. OF ANATOMY**  
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No. NKP SIMS/ Anat./ Cert./ 18 /2022

Date: 12/08/2022

**DEPARTMENT OF ANATOMY**

**CERTIFICATE**

Govt. of Maharashtra by its notification No. MED-190/3589/MED-4(A) dated 01.08.1990 has declared this institution as an approved institution for the purpose of Anatomical Act.

This department has received donated body (cadaver) of Mrs. Sushilabai Shashikant Bhalgat, Aged 70Yrs, Female, R/o Main Road, Vallabh Bhai Patel Ward, Bhandara –441904 on 12/08/ 2022, along with the Death Certificate.

**THIS DONATED BODY (CADAVER) WILL BE USED FOR TEACHING PURPOSES.**

*Dr. Deepali P. Onkar*

**DR. DEEPALI P. ONKAR**  
**PROFESSOR & HOD.**  
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No. NKP SIMS/ Anat./ Cert./ 19 /2022

Date: 23/08/2022

**DEPARTMENT OF ANATOMY**

**CERTIFICATE**

Govt. of Maharashtra by its notification No. MED-190/3589/MED-4(A) dated 01.08.1990 has declared this institution as an approved institution for the purpose of Anatomical Act.

This department has received donated body (cadaver) of Mrs. Panchfula Vishwas Tale, Aged 73Yrs, Female, R/o Dipori Wadgaon Rajdi, Amravati, Maharashtra, 444709 – on 23/08/2022, along with the Death Certificate.

**THIS DONATED BODY (CADAVER) WILL BE USED FOR TEACHING PURPOSES.**

*for* *Mr. Tabhan*

**DR. DEEPALI P. ONKAR**  
**PROFESSOR & HOD.**  
**DEPT. OF ANATOMY**  
**DR. DEEPALI ONKAR**  
**PROFESSOR & HOD**  
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No. NKP SIMS/ Anat./ Cert./ 20 /2022

Date: 02/09/2022

**DEPARTMENT OF ANATOMY**

**CERTIFICATE**

Govt. of Maharashtra by its notification No. MED-190/3589/MED-4(A) dated 01.08.1990 has declared this institution as an approved institution for the purpose of Anatomical Act.

This department has received donated body (cadaver) of Mrs. Smita Vinayak Kanetkar, Aged 83Yrs, Female, R/o Plot No. 7, Bhaskar Apts, Bajaj Nagar, Nagpur, Maharashtra, 440010 – on 02/09/2022, along with the Death Certificate.

**THIS DONATED BODY (CADAVER) WILL BE USED FOR TEACHING PURPOSES.**

*Dr. Deepali P. Onkar*

**DR. DEEPALI P. ONKAR  
PROFESSOR & HOD.  
DEPT. OF ANATOMY**

**DR. DEEPALI ONKAR  
PROFESSOR & HOD**

Department of Anatomy  
N.K.P. Salve Institute of Medical  
Sciences & Research Centre and  
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No. NKP SIMS/ Anat./ Cert./ 52 /2022

Date: 19/09/2022

**DEPARTMENT OF ANATOMY**

**CERTIFICATE**

Govt. of Maharashtra by its notification No. MED-190/3589/MED-4(A) dated 01.08.1990 has declared this institution as an approved institution for the purpose of Anatomical Act.

This department has received donated body (cadaver) of Mr. Viddyadhar Sharatchandra Ranade, Aged 90Yrs, Male, R/o Plot No. 172, Dhanlaxmi apartment, Near Chhatrapati Sabhagruh, Chhatrapati Nagar, Nagpur, Maharashtra, 440015 – on 19/09/2022, along with the Death Certificate.

**THIS DONATED BODY (CADAVER) WILL BE USED FOR TEACHING PURPOSES.**

*Dr. Deepali P. Onkar*

**DR. DEEPALI P. ONKAR**

**PROFESSOR & HOD.**

**DEPT. OF ANATOMY**

**DR. DEEPALI ONKAR**

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No. NKP SIMS/ Anat./ Cert. 21 /2022

Date 08<sup>th</sup> Oct 2022


**DEPARTMENT OF ANATOMY**

**CERTIFICATE**

Govt. of Maharashtra by its notification No. MED-190/3589/MED-4(A) dated 01.08.1990 has declared this institution as an approved institution for the purpose of Anatomical Act.

This department has received a cadaver of Smt. SUMAN GANPATRAO SHENDE, 80 Aged years, FEMALE, R/o. 40 Ladikar layout, Manewada Road, Nagpur - 24. On 8<sup>th</sup> October 2022 along with the Death Certificate.

**THIS CADAVER WILL BE USED FOR TEACHING PURPOSES.**

for 

**DR. DEEPALI P. ONKAR  
HOD. DEPT. OF ANATOMY**

**DR. DEEPALI ONKAR  
PROFESSOR & HOD**

Department of Anatomy  
N.K.P. Salve Institute of Medical  
Sciences & Research Centre and  
Lata Mangeshkar Hospital, Nagpur





**N.K.P. Salve Institute of Medical Sciences & Research Centre and  
Lata Mangeshkar Hospital**

Digdoh Hills, Hingna Road, Nagpur – 440 019

Phone (07104) 665000,244291, Fax:(07104) 306111- mail: [nkpsims1@rediffmail.com](mailto:nkpsims1@rediffmail.com)/website : [www.nkpsims.in](http://www.nkpsims.in)

No. NKP SIMS/ Anat./ Cert. **53** /2022

Date 10<sup>th</sup> Oct 2022

**DEPARTMENT OF ANATOMY**

**CERTIFICATE**

Govt. of Maharashtra by its notification No. MED-190/3589/MED-4(A) dated 01.08.1990 has declared this institution as an approved institution for the purpose of Anatomical Act.

This department has received a cadaver of Mrs. Vanlata Arun Huddar, 84 Aged years, Female, R/o. Plot No. 120 Shubhangi Layout, Khamla Road, Near Raut Hospital, Pande Layout, Khamla, Khamla, Nagpur - 440025. On 10<sup>th</sup> October 2022 along with the Death Certificate.

**THIS CADAVER WILL BE USED FOR TEACHING PURPOSES.**

*Dr. Deepali P. Onkar*

**DR. DEEPALI P. ONKAR  
HOD. DEPT. OF ANATOMY**

**DR. DEEPALI ONKAR**

**PROFESSOR & HOD**

**Department of Anatomy**

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No. NKP SIMS/ Anat./ Cert. 54 /2022

Date '13<sup>th</sup> Oct 2022

**DEPARTMENT OF ANATOMY**

**CERTIFICATE**

Govt. of Maharashtra by its notification No. MED-190/3589/MED-4(A) dated 01.08.1990 has declared this institution as an approved institution for the purpose of Anatomical Act.

This department has received a cadaver of Mrs. Nalini Manohar Kanetkar, aged 92 years, Female, R/o. Plot No. 90 Behind Joshi Chakki, Swawalambi Nagar, Ranapratap Nagar, Nagpur – 440022, on 13<sup>th</sup> October 2022 along with the Death Certificate.

**THIS CADAVER WILL BE USED FOR TEACHING PURPOSES.**

*Dr. Deepali P. Onkar*

**DR. DEEPALI P. ONKAR**  
**HOD. DEPT. OF ANATOMY**

**DR. DEEPALI ONKAR**  
**PROFESSOR & HOD**

**Department of Anatomy**  
N.K.P. Salve Institute of Medical  
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No. NKP SIMS/ Anat./ Cert. 22 /2022

Date 30<sup>th</sup> Oct 2022

**DEPARTMENT OF ANATOMY**

**CERTIFICATE**

Govt. of Maharashtra by its notification No. MED-190/3589/MED-4(A) dated 01.08.1990 has declared this institution as an approved institution for the purpose of Anatomical Act.

This department has received a cadaver of Mrs. Sumitra Kaliram Gaikwad, aged 62 years, Female, C/o. Kaliram Kashiram Gaikwad, Behind Tahsil Office, Bardi, Armori, District - Gadchiroli – 441208, on 30<sup>th</sup> October 2022 along with the Death Certificate.

**THIS CADAVER WILL BE USED FOR TEACHING PURPOSES.**

*Dr. Deepali P. Onkar*  
**DR. DEEPALI P. ONKAR**  
**HOD. DEPT. OF ANATOMY**

**DR. DEEPALI ONKAR**  
**PROFESSOR & HOD**

**Department of Anatomy**

**N.K.P. Salve Institute of Medical  
Sciences & Research Centre and  
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Phone (07104) 665000,244291, Fax:(07104) 306111- mail: [nkpsims1@rediffmail.com](mailto:nkpsims1@rediffmail.com)/website : [www.nkpsims.in](http://www.nkpsims.in)

No. NKP SIMS/ Anat./ Cert. 23 /2022

Date 18<sup>th</sup> Nov. 2022

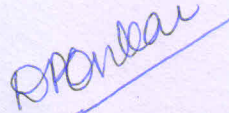
**DEPARTMENT OF ANATOMY**

**CERTIFICATE**

Govt. of Maharashtra by its notification No. MED-190/3589/MED-4(A) dated 01.08.1990 has declared this institution as an approved institution for the purpose of Anatomical Act.

This department has received a cadaver of Smt. Susheela Manikrao Dhanpalwar, aged 84 years, Female, R/o. 3-4 -1013/19, Rajendra Colony, Barkatpura Himayathnagar, Station Kachiguda, Hyderabad, Telangana – 500027, on 18<sup>th</sup> Nov. 2022 along with the Death Certificate.

**THIS CADAVER WILL BE USED FOR TEACHING PURPOSES.**

  
**DR. DEEPALI P. ONKAR**  
**HOD. DEPT. OF ANATOMY**  
**DR. DEEPALI ONKAR**  
PROFESSOR & HOD  
Department of Anatomy  
N.K.P. Salve Institute of Medical  
Sciences & Research Centre and  
Lata Mangeshkar Hospital, Nagpur





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No. NKP SIMS/ Anat./ Cert. 24 /2022

Date 19<sup>th</sup> Dec. 2022

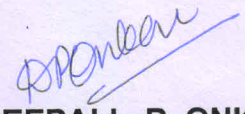
**DEPARTMENT OF ANATOMY**

**CERTIFICATE**

Govt. of Maharashtra by its notification No. MED-190/3589/MED-4(A) dated 01.08.1990 has declared this institution as an approved institution for the purpose of Anatomical Act.

This department has received a cadaver of Ku. Lata Mahadeo Patil, aged 64 years, Female, R/o. Near Buddha Putla, Galli No. 1, Kunjilal Peth, Bhagwan Nagar, Nagpur- 440027. Maharashtra on 19<sup>th</sup> Dec. 2022 along with the Death Certificate.

**THIS CADAVER WILL BE USED FOR TEACHING PURPOSES.**

  
**DR. DEEPALI P. ONKAR**  
**HOD. DEPT. OF ANATOMY**

**DR. DEEPALI ONKAR**  
PROFESSOR & HOD  
Department of Anatomy  
N.K.P. Salve Institute of Medical  
Sciences & Research Centre and  
Lata Mangeshkar Hospital, Nagpur

## Best Practice 2 - AI Based Software for Xray (CXR)

<b>S. No.</b>	<b>Particulars</b>	<b>Page no.</b>
1	AI based software for systematic reporting of CXR by Department of Radio diagnosis	<b>36-37</b>
2	Algorithm for reporting of the chest radiographs	<b>38-39</b>
3	Website for the reporting of Chest Radiographs	<b>40-42</b>
4	Loan Agreement of Deep-Tech for Artificial Intelligence based solutions	<b>43-45</b>

## **Department of Radio diagnosis**

Best Practice 2 - AI Based Software for Xray (CXR)





**N.K.P. Salve Institute of Medical Sciences & Research Centre and  
Lata Mangeshkar Hospital**  
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No.NKP&LMH/Radiology/210/2022

Date : 14/12/2022

**BEST PRACTICES IN THE DEPARTMENT OF  
RADIOLOGY (YEAR 2022 )**

**1. Title:**

Artificial Intelligence based software for detection of pathologies and systematic reporting of Chest radiographs.

**2. Objectives:**

- To develop AI based software for systematic and accurate reporting of chest radiographs daily.
- To create a digital image library consisting of findings of reported chest radiographs.

**3. The Context:**

Reporting of chest radiographs in day to day practice is a challenging task because of complex interpretations and many overlapping structures have to be visualized on 2 dimensional image. Many factors affect the accuracy of reporting including the expertise of radiologist, technical factors, compliance of the patient and expertise of the technician. The idea of development of this algorithm was based on minimizing the errors in diagnosis due to mechanical reasons and human errors.

The template for the algorithm is broadly classified as follows:

1. NORMAL RADIOGRAPHS
2. CONGENITAL PATHOLOGIES
3. NEONATAL PATHOLOGIES
4. INFECTIONS
5. NEOPLASTIC PATHOLOGIES
6. CHEST TRAUMA
7. MISCELLANEOUS PATHOLOGIES



#### **4. The Practice:**

The main objective of this practice was to develop a systematic approach for reporting of routine chest radiographs in department of radiodiagnosis which gives a proper step by step delineation of pathologies and help the junior residents in reaching at a particular diagnosis in a structured way. We have provided resources to help the residents standardize reporting practices to enhance efficiency, demonstrate value and improve diagnostic quality of chest radiography reporting. The ideal report should be uniform, comprehensive, easy to understand and readable. This study itself is unique since this approach has been carried out for the first time in our institute and has already benefitted the junior residents immensely. We also intend to create a digital library which can serve the purpose of storing such methodically reported radiographs. However, few limitations were encountered in the evaluation of this study especially the technical parameters of the radiograph with few appearing rotated or under/over exposed. Due to this limitation few pathologies were overlooked and few normal chest radiographs were overdiagnosed. Another limitation faced was the reporting of portable chest radiographs done in emergency or intensive care setting which were usually rotated or taken in mid inspiratory or expiratory phase.

#### **5. Evidence of success:**

The study has helped many residents in describing findings in a chest radiograph in a proper methodical approach and in reaching an accurate diagnosis which ultimately improves the diagnostic yield of reporting of the same.

#### **6. Problems Encountered and Resources Required:**

This algorithm however did not prove to be as useful in portable radiographs as it was in the routine setting where modern radiographs are now carried out digitally. As the quality of these portable radiographs is questionable, many of these xrays are overdiagnosed or underdiagnosed. Hence the resources required for such radiographs should be optimal and they include manual as well as technical factors such as a properly trained technician as well as properly positioned radiographs.

Another important resource required is Picture Archiving and Communication System (PACS) which help in easy reporting and availability of these radiographs.

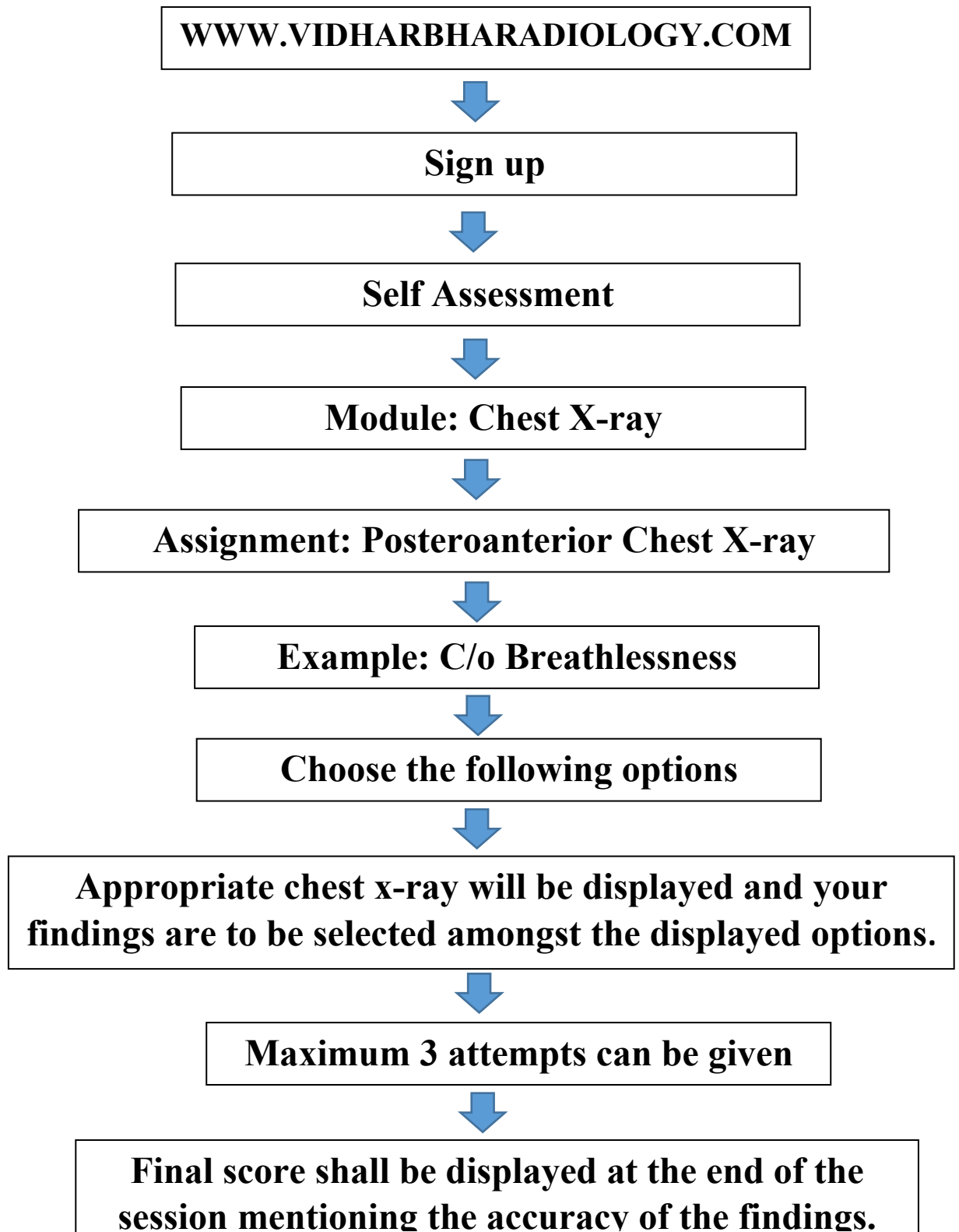


**DR. AVINASH DHOK**  
**PROFESSOR & HOD**

**Department of Radiodiagnosis**  
N.K.P. Salve Institute of Medical  
Sciences & Research Centre and  
ata Mangeshkar Hospital, Nagpur

# **ALGORITHM FOR REPORTING OF THE CHEST RADIOGRAPHS**

# **ALGORITHM FOR REPORTING OF THE CHEST RADIOGRAPHS**



# WEBSITE FOR THE REPORTING OF CHEST RADIOGRAPHS



11:20 AM Mon 2 Jan

Vidarbha Chapter (Maharashtra State Branch of Indian Radiological & Imaging Association)

Item 1 Item 2 Home Sign out

# Welcome

## Self-assessment

Module : Chest X-ray		
Batach Name : Chest X-ray 2021	Start Date : 2022-10-30 End Date :	Module Sttus : applied
Assignment Status : Attempts	Assignment Marks :	Submit Assignment / Retry
<a href="#">Submit Assignment</a>		

Section : Posteroanterior x-ray		
Assignment Status : 0 Attempts	Assignment Marks : 0	Submit Assignment / Retry
<a href="#">Submit Assignment</a>		

This self-assessment course to update your skills.

Offices	Solar Systems	Contact	Offices
One	One	<a href="#">Twitter</a>	One
Two	Two	<a href="#">Facebook</a>	Two
Three	Three	<a href="#">Instagram</a>	Three
Four	Four	<a href="#">Pinterest</a>	Four



11:20 AM Mon 2 Jan  
Vidarbha Chapter (Maharashtra State Branch of Indian Radiological & Imaging Association)  
Item 1 Item 2 Home Sign out

**Q. 1: ICU patient with breathlessness**

Number of Attempts : 1

Submit Assignment

Marks obtained : 69.14

**Q. 2: c/o breathlessness**

Number of Attempts :

Submit Assignment

Marks obtained :

**Q. 3: Fever for 15 days**

Number of Attempts :

Submit Assignment

Marks obtained :

**Q. 4: cough with fever**

Number of Attempts :

Submit Assignment

Marks obtained :

**Q. 5: fever**

Number of Attempts :

Submit Assignment

Marks obtained :



# LOAN AGREEMENT OF DEEPTech FOR ARTIFICIAL INTELLIGENCE BASED SOLUTIONS



DEEPTTEK MEDICAL IMAGING PRIVATE  
LIMITED

CINU74999P\2018FTC177289

[www.DeepTek.ai](http://www.DeepTek.ai)

Loan Agreement for Special AI Based Solutions "WIP" (Works in progress) or "ASP" "Addin / Special Sequence Package" (WIP / ASP) including Dicom Data.

Dear Dr Avinash Dhok  
Head of Department of Radiology  
NKPSIMS, Hospital and Research center  
Nagpur, Maharashtra  
PINCODE 440019  
Email: nkpsims1@rediffmail.com  
Phone: 07104-244904

We are pleased to provide you on a loan basis with the following Special Work package WIP 1 ASP (LOANED ITEM)

- 1- Artificial Intelligence tool for detection and categorization of normal and abnormal chest radiographs using deep learning.
- 2- Notification client software and notification client AI bot engine

for the use in connection with or on your DeepTek system(s):

The loan duration is 6 months, upon date of last signature under this agreement.

As Deliverable under this Agreement, you will provide us with feedback on the evaluation of the WIP/ASP and further information related thereto as described herein.

**PURPOSE:**

Normal – Abnormal chest radiograph prototype evaluation to:

- Conduct Qualitative assessment of the functionality and workflow.
- Conduct Quantitative assessment of the functionality.
- Provide clinical cases and evidences of evaluation in terms of case summary.csv and the statistics.csv

**DESCRIPTION:**

DeepTek is developing artificial intelligence (AI) solutions to assist the radiologists in various clinical tasks. DeepTek has developed an AI algorithm that assists the radiographer and the radiologist with the triaging of acute patients. In this collaboration, the clinical partner is enabled to assess modern techniques of workflow improvements that allow for better resource allocation, and shorter time-to-treatment for the patients. DeepTek gets feedback from the clinical partner to include in further algorithm developments to address the clinical needs properly.

- NKPSIMS, Hospital and Research center Nagpur, Maharashtra. ("PARTNER") hereby nominates as its scientific project managers:  
Dr. Prashant Onkar; Email: [nkpsimsradio@gmail.com](mailto:nkpsimsradio@gmail.com)
- Dr Amit Kharat for Liaoning between DPU and DeepTek.
- DeepTek hereby nominates as its scientific project managers: Ajit Patil; Email: [ajit@deeptek.ai](mailto:ajit@deeptek.ai).





DEEPTTEK MEDICAL IMAGING PRIVATE  
LIMITED  
CINU74999PN2018FTC17728  
[www.DeepTek.in](http://www.DeepTek.in)

- The Parties of this agreement shall during the performance of the WIP evaluation keep in contact through the scientific project managers and shall in case of upcoming problems, specifically if they cannot comply anymore with the time schedule defined in the MILESTONES, determine possible solutions and implement chosen solutions.

The timeline to be discussed on mutual basis and a clinical outcome will be presented as a collaborative research document/presentation/research paper.

#### DICOM data:

Patient study acquired will be post processed using the supplied AI for Normal- Abnormal Detection and classification Prototype stand-alone software of Xray Chest data including and also be reviewed through the provided bot engine as a part of the mobile device.  
AP or PA view of chest radiographs

#### Data Specification:

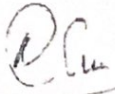
DeepTek will provide a configuration (WIP DICOM profile) that is supposed to support anonymization and its use is recommended. For details, please see the configuration documentation, which will be provided separately.

The following data shall be kept:

- Age of the patients in years
- Sex of the patients
- Date of examination modified by a random value(increment)
- DICOM-UIDs for instance Study Instance UID replaced by a hash value.
- Scanner information like manufacturer, modality and other
- Technical data required for the image analysis (e.g., scan protocol) etc.
- Pixel data in relevant studies.

Ajit Patil  
DeepTek Medical Imaging Pvt Ltd

Amit Kharat  
Coordinator

  
Dr Avinash Dhok  
HOD, Radiology  
**DR. AVINASH**  
PROFESSOR &  
Department of Radiology  
N. S. S. Salve Institute  
of Medical & Research  
Education  
Pune - 411045, MH.