Image Quality Assessment

The quality of the image was assessed by the ability to perform **Detection** (presence or absence of pathology)and **Estimation** (including judgments about absolute or relative intensities within, or between anatomical structures in the image)

Overall visual quality of the image is assessed on the scale of 1 to 5 (1-unaceptable, 2- poor, 3-satisfactory, 4- good and 5-excellent).

Image Sample	Image Quality Assessment		
MRI_16Bit	Detection	Estimation	Overall Performance
MR_16_01	✓	✓	5
MR_16_02	✓	✓	5
MR_16_03	✓	✓	5
MR_16_04	✓	✓	5
MR_16_05	✓	✓	5
MR_16_06	✓	✓	5
MR_16_08	✓	✓	5
MR_16_10	✓	✗	4
MR_16_12	✓	✗	4
MR_16_14	✓	✗	3
MR_16_16	✓	✗	3
MR_16_18	✓	✗	2

Image Sample	Image Quality Assessment		
MRI_8Bit	Detection	Estimation	Overall Performance
MR_8_01	✓	✓	5
MR_8_02	✓	✓	5
MR_8_03	✓	✓	5
MR_8_04	✓	✓	5
MR_8_05	✓	✓	5
MR_8_06	✓	✓	5
MR_8_08	✓	✓	5
MR_8_10	✓	✗	4
MR_8_12	✓	✗	4
MR_8_14	✓	✗	3
MR_8_16	✓	✗	3
MR_8_18	✓	✗	2

Image Sample	Image Quality Assessment		
CT_16Bit	Detection	Estimation	Overall Performance
CT_16_01	✓	✓	5
CT_16_02	✓	✓	5
CT_16_03	✓	✓	5
CT_16_04	✓	✓	5
CT_16_05	✓	✓	5
CT_16_06	✓	✓	5
CT_16_08	✓	✓	5
CT_16_10	✓	✓	5
CT_16_12	✓	✗	4
CT_16_14	✓	✗	3
CT_16_16	✓	✗	2
CT_16_18	✓	✗	2

Image Sample	Image Quality Assessment		
CT_8Bit	Detection	Estimation	Overall Performance
CT_8_01	✓	✓	5
CT_8_02	✓	✓	5
CT_8_03	✓	✓	5
CT_8_04	✓	✓	5
CT_8_05	✓	✓	5
CT_8_06	✓	✓	5
CT_8_08	✓	✓	5
CT_8_10	✓	✓	5
CT_8_12	✓	✗	3
CT_8_14	✓	✗	3
CT_8_16	✓	✗	2
CT_8_18	✓	✗	2

Urvashi
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ECE department
JUIT, Waknaghat, Distt. Solan (H.P)

Radiologist
Ripon Hospital, Distt. Shimla, (H.P)
Radiologist
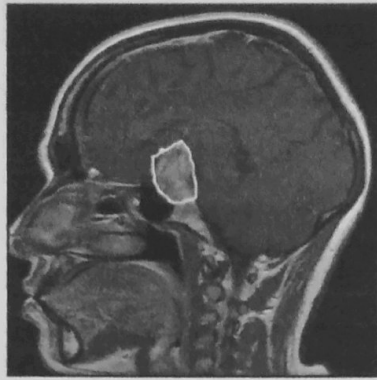DDUZH, Shimla

| Image Sample CT_512_8	Image Quality Assessment		
	Detection	Estimation	Overall Performance
01	✓	✓	5
02	✓	✓	5
03	✓	✓	5
04	✓	✓	5
05	✓	✓	5
06	✓	✓	5
08	✓	✓	5
10	✓	✓	5
12	✓	✗	4
14	✓	✗	4
16	✓	✗	3
18	✓	✗	2

Image Sample MR_256_8	Image Quality Assessment		
	Detection	Estimation	Overall Performance
01	✓	✓	5
02	✓	✓	5
03	✓	✓	5
04	✓	✓	5
05	✓	✓	5
06	✓	✓	5
08	✓	✓	5
10	✓	✓	5
12	✓	✗	4
14	✓	✗	3
16	✓	✗	2
18	✓	✗	2

Image Sample MR_512_8	Image Quality Assessment		
	Detection	Estimation	Overall Performance
01	✓	✓	5
02	✓	✓	5
03	✓	✓	5
04	✓	✓	5
05	✓	✓	5
06	✓	✓	5
08	✓	✓	5
10	✓	✓	5
12	✓	✗	4
14	✓	✗	3
16	✓	✗	3
18	✓	✗	2

Image Sample MR_R	Image Quality Assessment		
	Detection	Estimation	Overall Performance
01	✓	✓	5
02	✓	✓	5
03	✓	✓	5
04	✓	✓	5
05	✓	✓	5
06	✓	✓	5
08	✓	✓	5
10	✓	✗	4
12	✓	✗	4
14	✓	✗	3
16	✓	✗	2
18	✓	✗	2

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Radiologist
Ripon Hospital, Distt. Shimla (H.P)
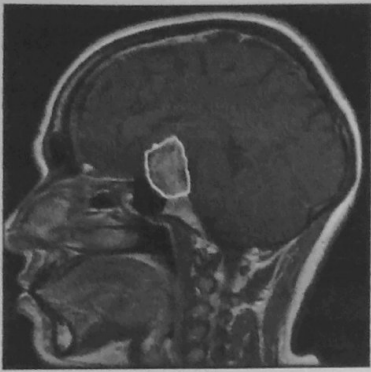
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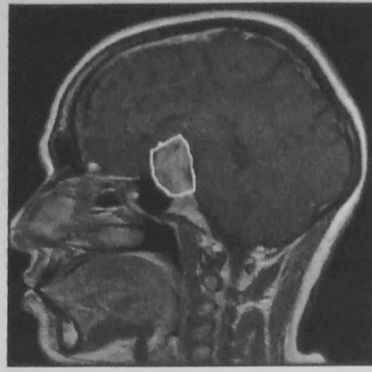
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MR_8_03
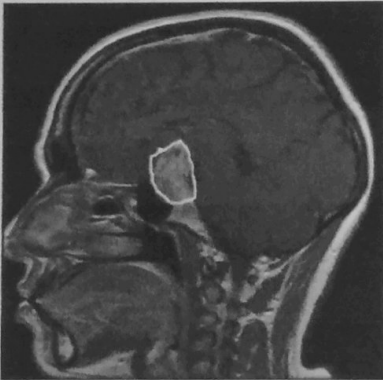
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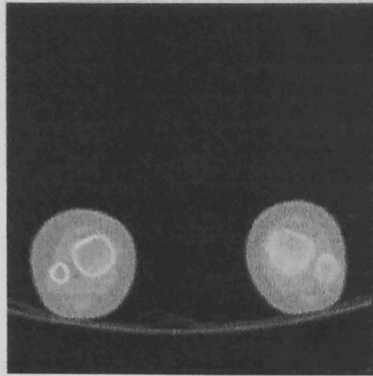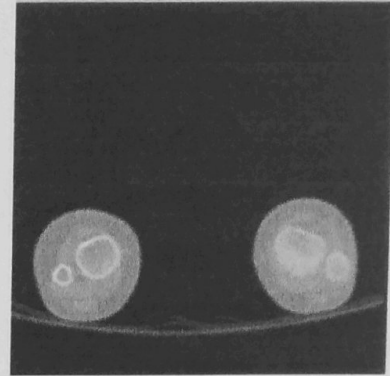MR_8_05
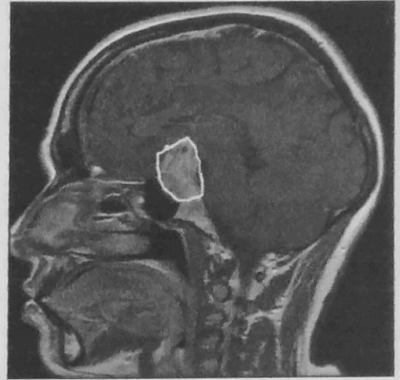
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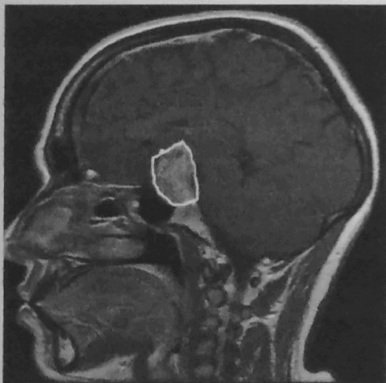
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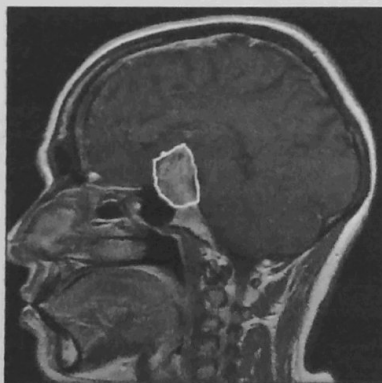
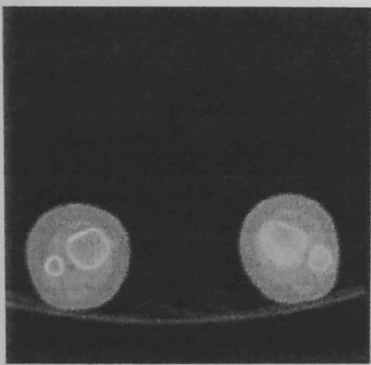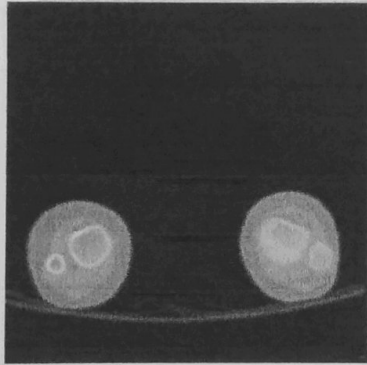MR_8_10
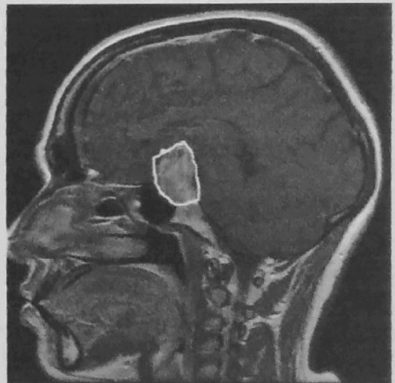
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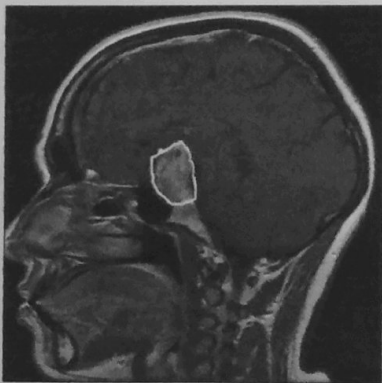
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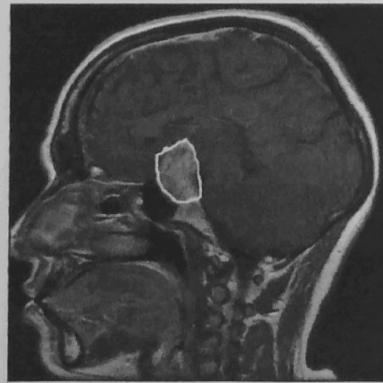
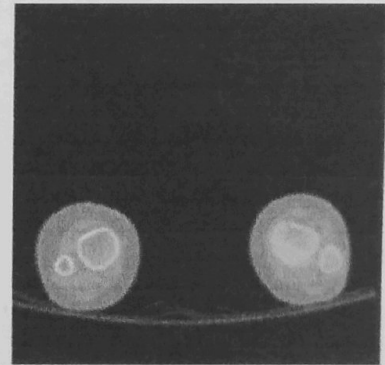MR_8_16
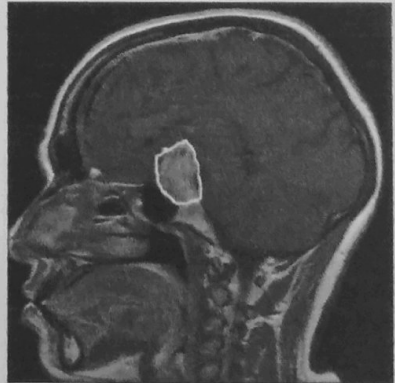
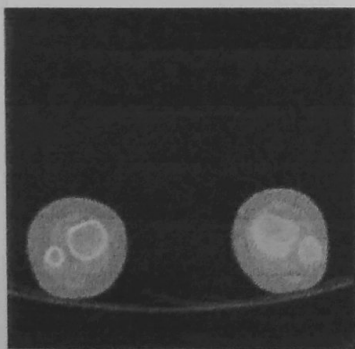MR_8_18
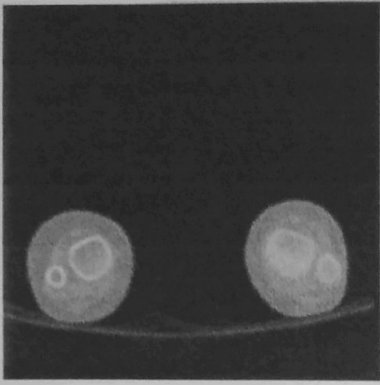
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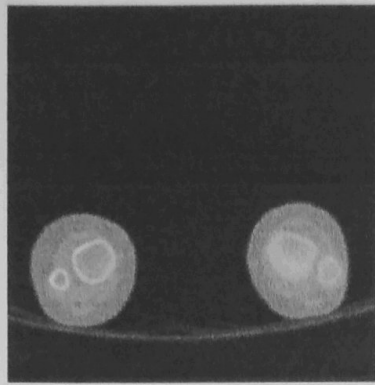
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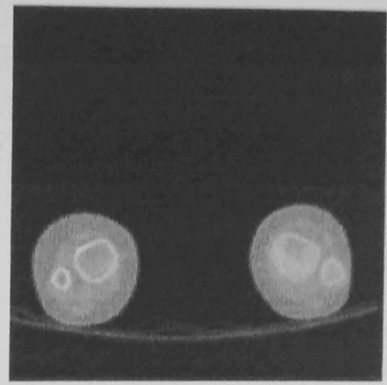
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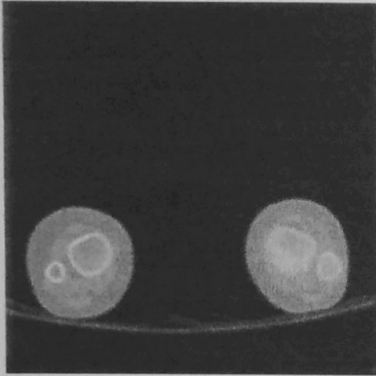
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CT_8_05

CT_8_06

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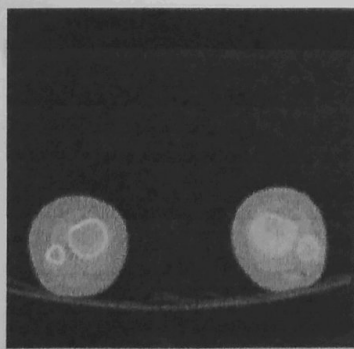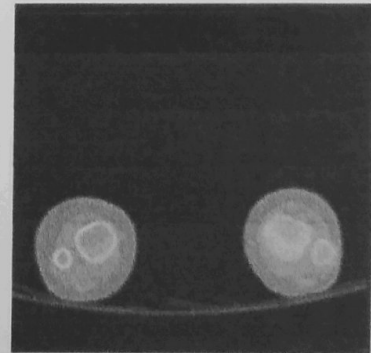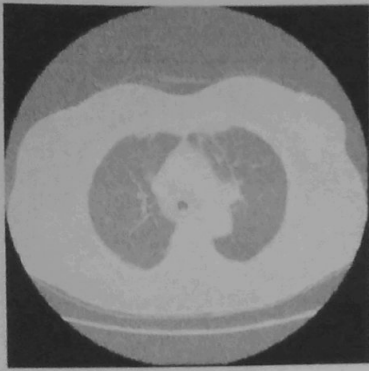

CT_8_10

CT_8_12

CT_8_14

CT_8_16

CT_8_18

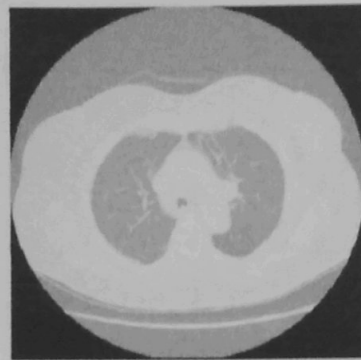Radiologist
DDUZA, Shimla

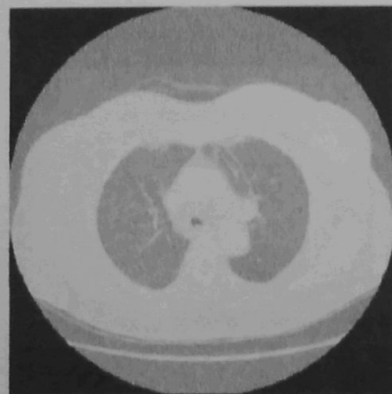CT_16_01

CT_16_02

CT_16_03

CT_16_04

CT_16_05

CT_16_06

CT_16_08

CT_16_10

CT_16_12

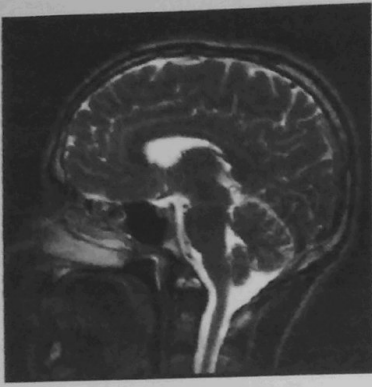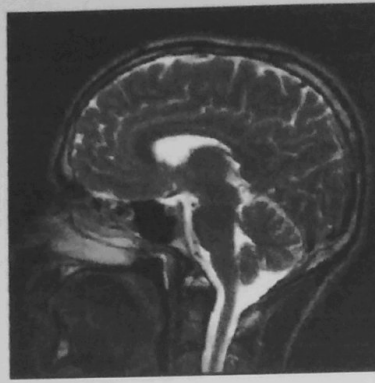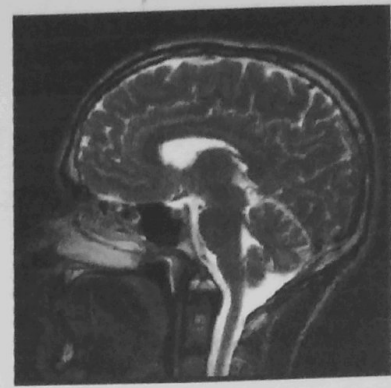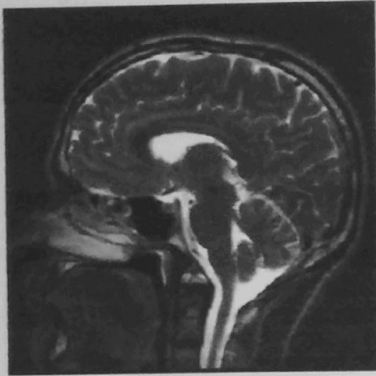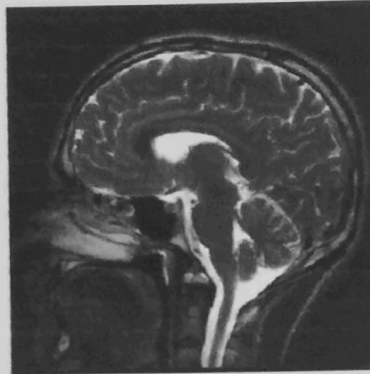CT_16_14
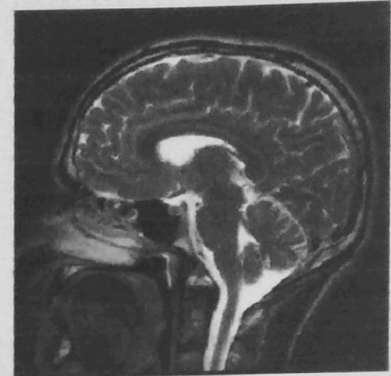

CT_16_16

CT_16_18

Radiologist
DRUZH, Shimla

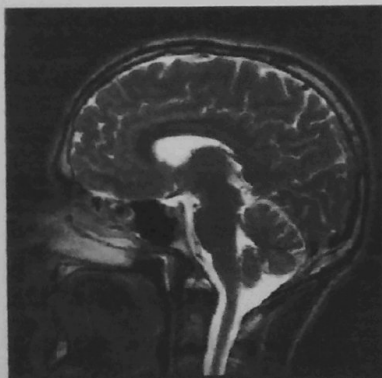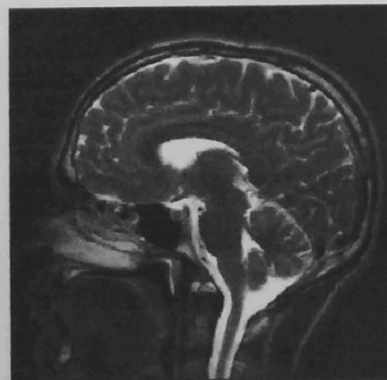MR_16_01   MR_16_02   MR_16_03
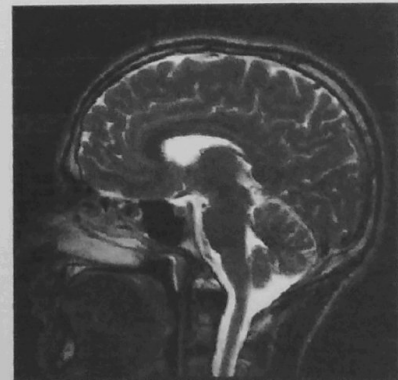
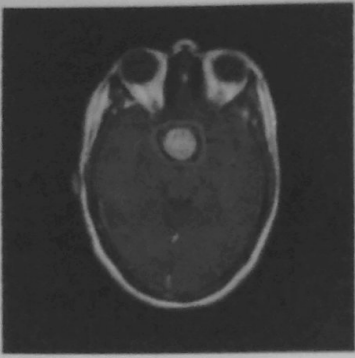MR_16_04   MR_16_05   MR_16_06
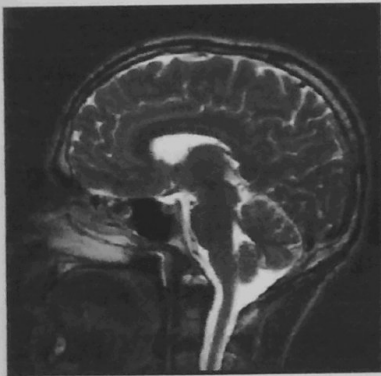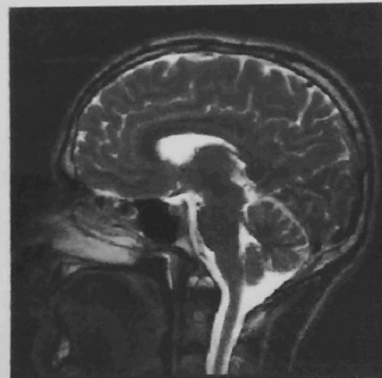
MR_16_08   MR_16_10   MR_16_12

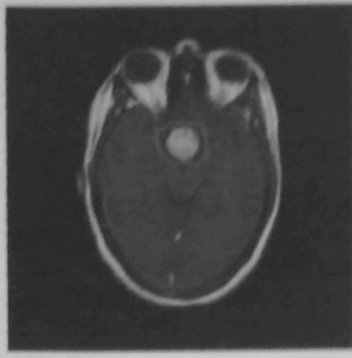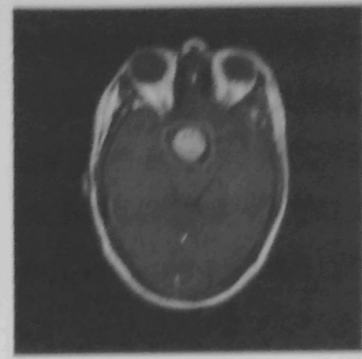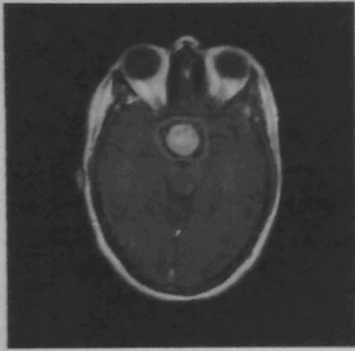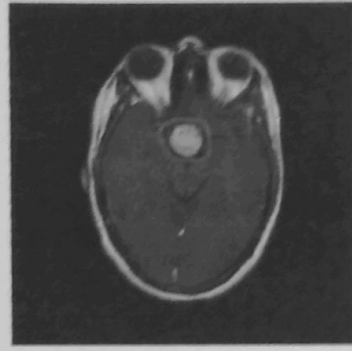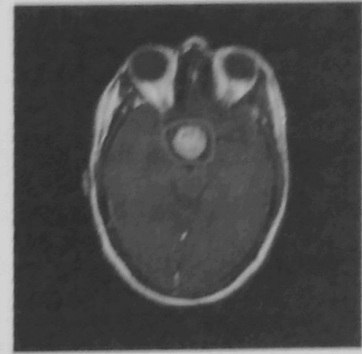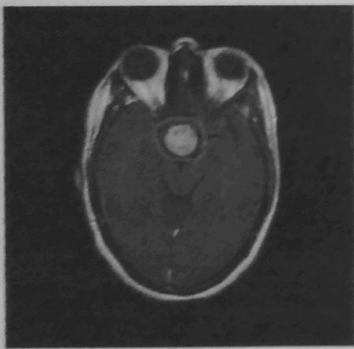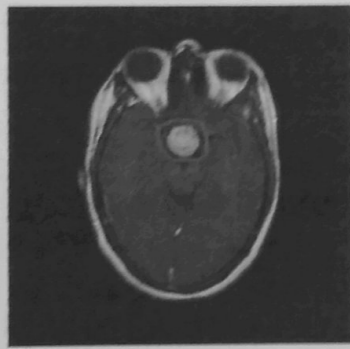MR_16_14   MR_16_16   MR_16_18

MR_R_01   MR_R_02   MR_R_03
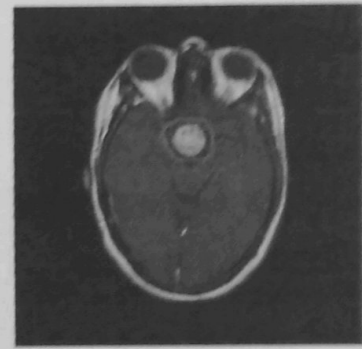
MR_R_04   MR_R_05   MR_R_06

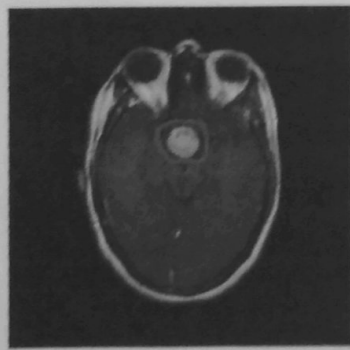MR_R_08   MR_R_10   MR_R_12
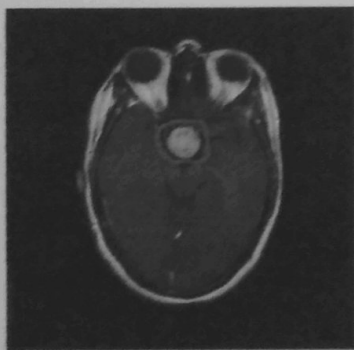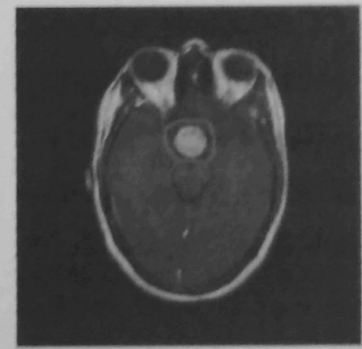
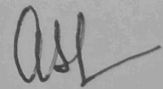MR_R_14   MR_R_16   MR_R_18

TO WHOMOSEVER IT MAY CONCERN

Date: 21 Jan 2019

It is certified that volumetric medical image data of MRI and CT of various modalities are checked for quantization levels for good recovery and reconstruction of compressed medical images. The quality of the image was assessed by the ability to perform Detection (presence or absence of pathology) and Estimation (including judgments about absolute or relative intensities within, or between anatomical structures in the image) of the images worked upon by research scholar Ms. Urvashi Sharma of ECE Department, Jaypee University of Information Technology, Distt. Solan under the supervision of Dr. Meenakshi Sood and Dr. Emjee Puthooran.

Signature of the Radiologist

(Name and stamp)

Radiologist
DDUZH, Shimla