

## HP18: Chest Radiography (X-ray) Coding Form

### Purpose

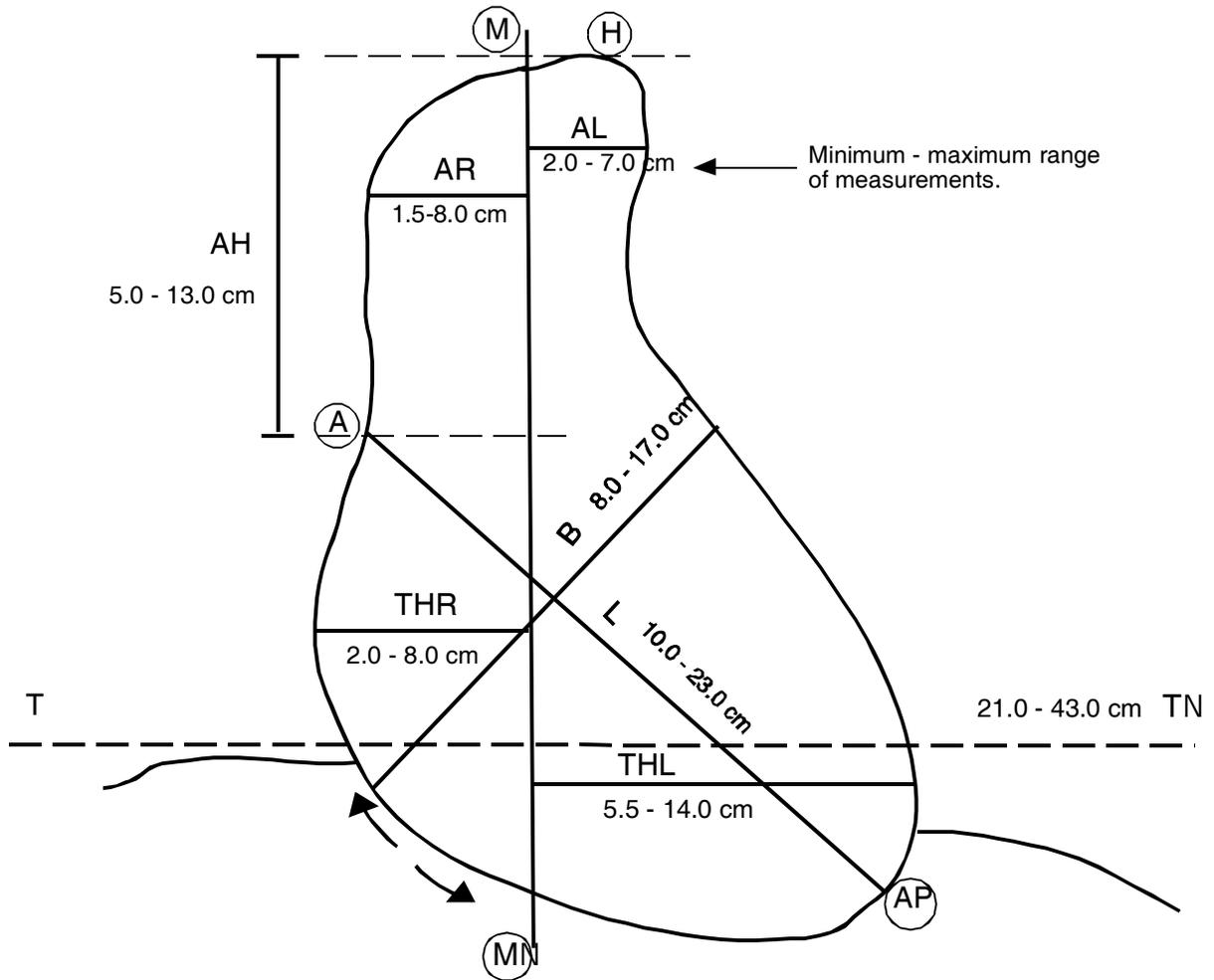
The *Chest X-ray Coding Form* (HP18) records the measurements obtained from participant chest x-rays. Figure 2 shows the measurements that are recorded on the form. The HDFP radiography laboratory is described in **Section 10.3** of the *Manual of Operations*. **Section 8.5.5** of the *Manual* describes general radiography procedures and **Section 8.5.1** gives the schedule for radiography of participants. **Section 14.5** of the *Manual* describes the x-ray measurements and methods in detail.

### Special Considerations

- Heart measurements in centimeters, along with their minimum and maximum range limits, are given in Figure 2.
- Field F18013 should be examined to determine whether any technical problems interfered with measurement of the x-ray.
- Field F18016, aortic tortuosity, and fields F18017-F18019 were coded only on fifth year x-rays.

### X-ray Measurements

MMN=	Midline.
H	= Superior margin of aorta.
A	= Junction of superior vena cava and right heart.
AP	= Apex
AL	= Maximum width of the ascending aorta left of midline.
AR	= Maximum width of the ascending aorta right of midline.
AW	= Aortic width (sum of AL and AR).
AH	= Height of aorta from right cardiac junction to top of aortic knob.
AT	= Aortic tortuosity.
THL	= Maximum width from midline to left heart border.
THR	= Maximum width from midline to right heart border.
HD	= Heart diameter (sum of THL and THR).
L	= Long diameter from junction of superior vena cava and right atrium to apex.
B	= Broad diameter from junction of right atrium and diaphragm to junction of pulmonary artery.
TTN	= Transverse diameter of the thorax — largest measureable.
CTR	= Cardiothoracic ratio (ratio of HD and TTN).
FA	= Frontal area calculated by using the broad (B) and long (L) diameters in the equation $FA = (B/4)(B)(L)$ , assuming that the heart is an ellipsoid.



**Figure 2.** Heart and chest measurements on x-ray. Measurements are in centimeters.

See previous page for definitions of points and measured distances.

X-ray Coding Form

Form 1 8

1. Program Number: 3-11

Batch Number 18-25 2

2. Acrostic: 12-17 1

3. Date of X-ray: Month 26 27 Day 28 29 Year 30 31 3

4. Quality of film: 1 Good 2 Fair 3 Bad 4 32

5. Measurements:

5 AL 33 34 . 35 16 AT 61 62 . 63 TT' 48 49 . 50 10
6 AR 36 37 . 38 8 THR 42 43 . 44 L 51 52 . 53 11
7 AH 39 40 . 41 9 THL 45 46 . 47 B 54 55 . 56 12

6. Pulmonary venous hypertension: 17 64
1 Normal 2 Questionable 3 Probable 4 Abnormal

7. Clinical interpretation:

18 65 Normal 23 74 Bone Disorder 1 if checked 0 otherwise
21 72 Pulmonary Disorder 24 75 Other
22 73 Cardiac Disorder 25 76 Multiple Disorders

8. Comments:

13 57 1 No comment 26 77 Curvature of the spine
2 2 Can't measure film 27 78 Underexposure
3 3 Can't measure TT' 28 79 Rotation
29 80 Other

9. Year of Follow-up 14 58 2 if second year 5 if fifth year blank otherwise

20 67-71 Obsolete field

10. Outside source x-ray: 1 Yes 2 No 19 66

11. This x-ray coded by: 15 59 60

FORM LENGTH X-RAY FORMAT  
FORM HP18

<u>Field</u>	<u>Columns</u>	<u>Min</u>	<u>Max</u>	<u>Description</u>
	1-11			Form number/program number (18)
1	12-17			Acrostic
2	18-25			Batch number
3	26-31			Date of film
4	32			Quality of film 1=good 2=fair 3=bad
5	33-35	2.0	7.0	AL
6	36-38	1.5	8.0	AR
7	39-41	5.0	13.0	AH
8	42-44	2.0	8.0	THR
9	45-47	5.5	14.0	THL
10	48-50	21.0	43.0	TT
11	51-53	10.0	23.0	L
12	54-56	8.0	17.0	B
13	57			Comment 0=no comment 1=can't measure film 2=can't measure TT (transverse diameter of the thorax)-largest measurable either extends past film or is unclear. 3=curvature of the spine 4=other
14	58 <input type="checkbox"/>			½ if other 2 if second year follow-up