

## Abdomen

### ABDOMEN GENERAL

X-rays of the abdomen are usually taken with the patient lying down; erect views are taken only when the clinical diagnosis is “acute abdomen”, e.g., intestinal obstruction or perforation of the gut.

#### Patient diagnosed as “acute abdomen”, able to stand

1. Acute abdomen AP supine, page 18.
2. Acute abdomen AP standing erect, page 19.

#### Patient diagnosed as “acute abdomen”, unable to stand

Acute abdomen AP supine (see ABDOMEN 1).

3. Acute abdomen lateral decubitus, page 20.  
Two views have to be taken.

#### Non acute abdomen

Use ABDOMEN 1 (page 18) or ABDOMEN 5 (page 22).

### INFANTS AND SMALL CHILDREN WEIGHING UP TO 15 kg

Acute abdomen AP supine (see ABDOMEN 1, page 18).

4. Abdomen AP (hanging), page 21.

# ABDOMEN 1

## ABDOMEN AP Supine BASIC

### Cassette speed

Cassette with screen-film combination, nominal speed 200/400 in the cassette holder

### Cassette size

35×43 cm (14×17 inches)

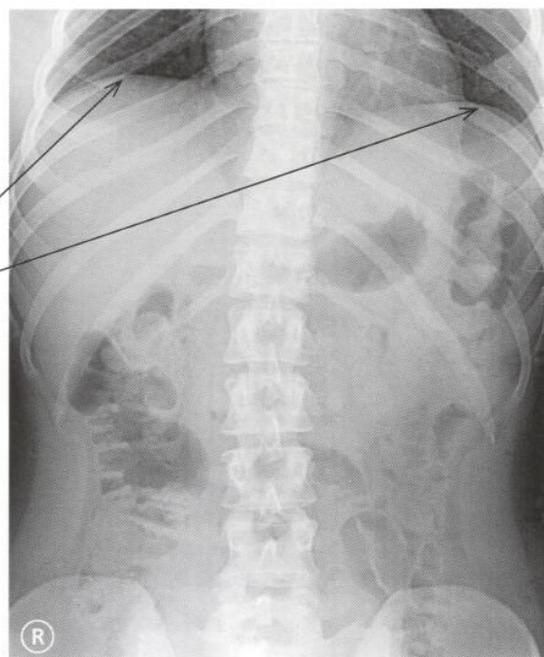
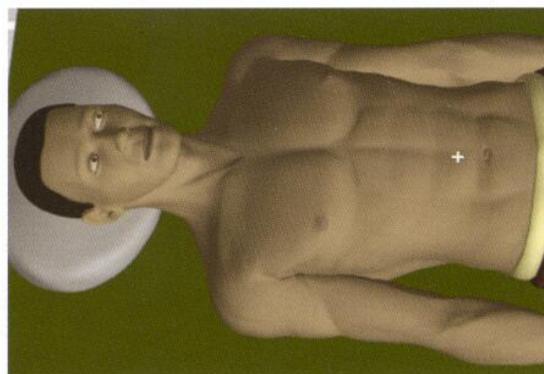
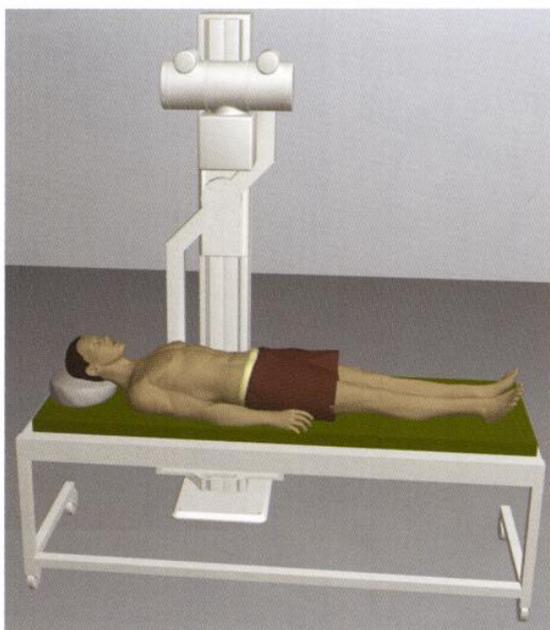
24×30 cm (10×12 inches) for a child

Use a **R**ight or **L**eft marker

Exposure values	mAs	
	"blue" system	"green" system
70 kV	200	400
Average	80	40
Range	50–100	25–50
Child 30 kg	40	20

1. Bring in the patient, decide the cassette format and put the cassette in the cassette holder. Collimate to that format.
2. Position the patient. Put a small pillow under the head. Centre. Collimate further, if possible.
3. Tell the patient to breathe **OUT** and hold the breathe **OUT**. Expose.
4. Tell the patient to breathe normally.

For **INFANTS** and **SMALL CHILDREN** weighing up to 15 kg, see **ABDOMEN 4**.



### Comments

The diaphragm must be visible; if it is not, change the centre and take a new film.

The pubic symphysis must also be visible; if it is not, take an **ABDOMEN 6** (urinary bladder view).

**ABDOMEN AP: "ACUTE ABDOMEN"** Standing erect BASIC

**Cassette speed**

Cassette with screen-film combination, nominal speed 200/400 in the cassette holder

**Cassette size**

35×43 cm (14×17 inches)

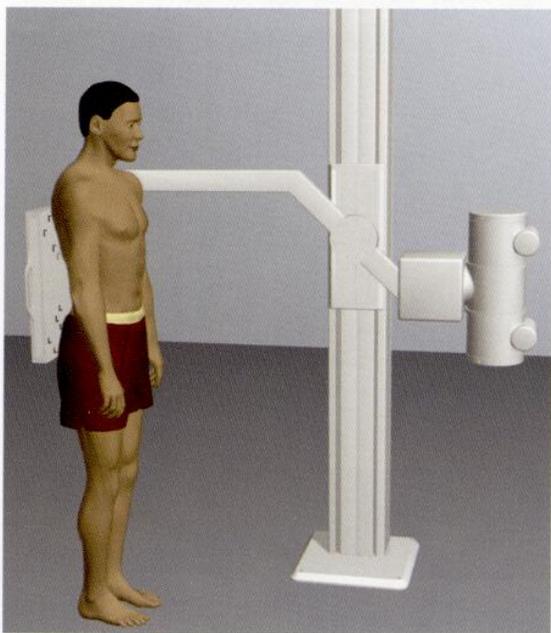
24×30 cm (10×12 inches) for a child

Use a **R**ight or **L**eft marker

Exposure values	mAs	
	"blue" system 200	"green" system 400/450
Average	80	25
Range	50–160	16–50
Child 30 kg	32	12.5

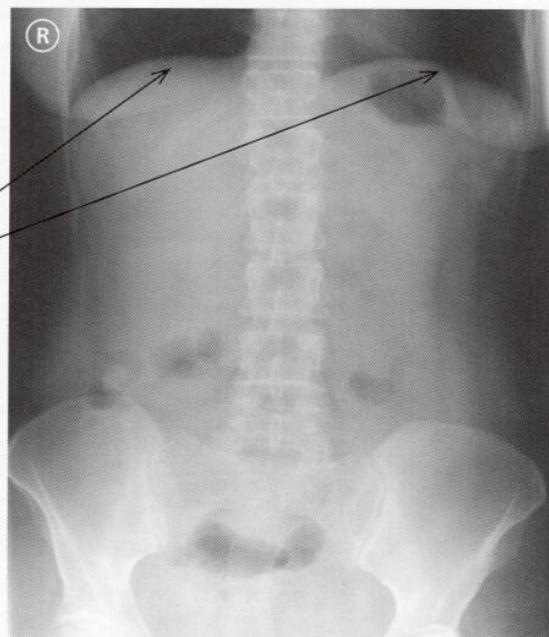
1. Bring in the patient, decide the cassette format and put the cassette in the cassette holder. Collimate to that format.
2. Position the patient. Press the patient's abdomen against the cassette holder. Centre. Collimate further, if possible.
3. Tell the patient to stop breathing. Expose.
4. Tell the patient to breathe normally.

For **INFANTS** and **SMALL CHILDREN** weighing up to 15 kg, see **ABDOMEN 4**.



**Comments**

The diaphragm must be visible; if it is not, change the centre and take a new film.



## ABDOMEN LATERAL DECUBITUS Lying first on the left side, then on the right

Both views to be taken

### Cassette speed

Cassette with screen-film combination, nominal speed 200/400 in the cassette holder

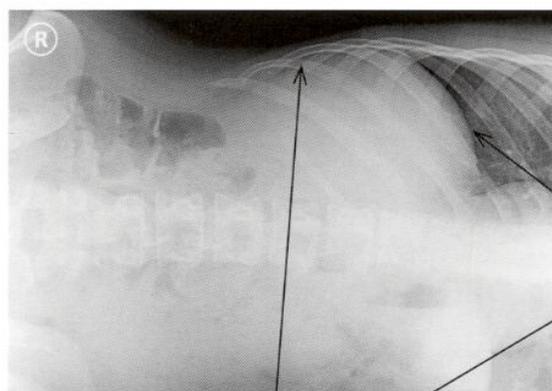
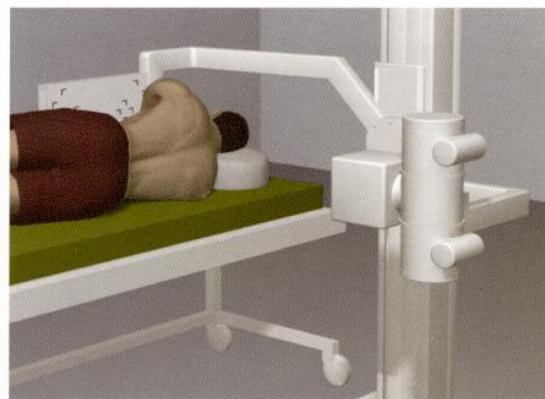
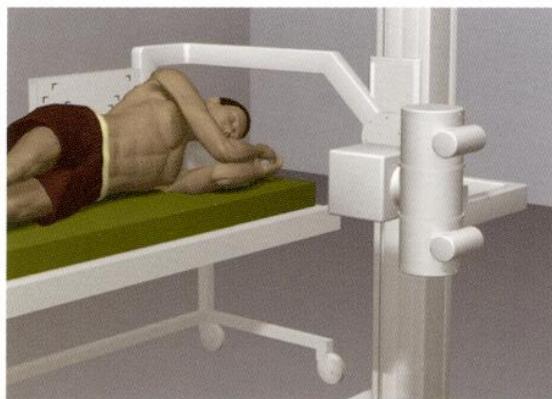
### Cassette size

35×43 cm (14×17 inches)

Use a **R**ight or **L**eft marker

1. Bring in the patient, put the cassette in the cassette holder. Collimate to the format.
2. Position the patient. THE PATIENT MUST LIE AGAINST THE CASSETTE HOLDER. Centre. Collimate further, if possible.
3. Tell the patient to breathe OUT and hold the breath OUT. Expose.
4. Tell the patient to breathe normally.
5. Turn the patient over and repeat.

Exposure values	mAs	
	"blue" system 200	"green" system 400/450
80 kV	50	20
Average	40–100	16–40
Range		



### Comments

The upper side of the abdomen must be visible at the top of the films.

The upper part of diaphragm must be visible on the films.

**ABDOMEN AP Erect BASIC**

Infants and small children weighing up to 15 kg, hanging by the upper arms

**Cassette speed**

Cassette with screen-film combination, nominal speed 200/400 in the cassette holder

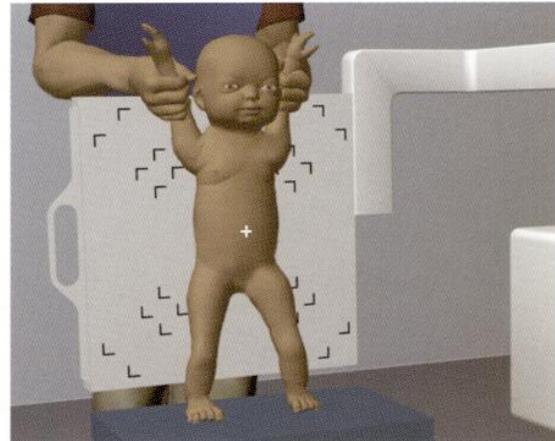
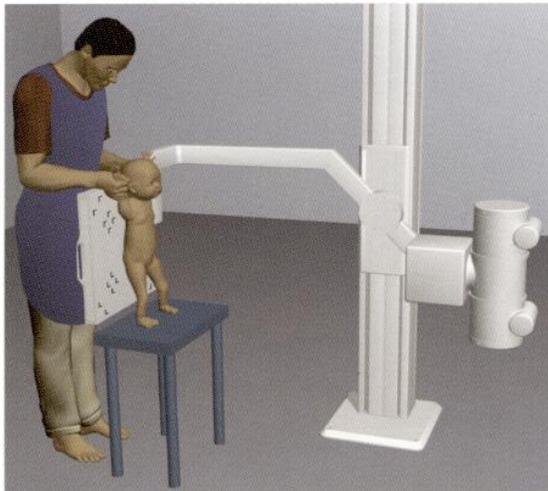
**Cassette size**

24×30 cm (10×12 inches)

Use a **R**ight or **L**eft marker

Exposure values	mAs	
	"blue" system	"green" system
70 kV	200	400
Average	20	10
Range	8–32	4–16

1. Bring in the patient, put the cassette in the cassette holder. Collimate to the format.
2. Position the patient. The child is held hanging by the upper arms (if possible, its feet can be supported by a stool or the floor or by another person holding the thighs) with its back resting against the front of the cassette holder.
3. THE PERSON(S) HOLDING THE CHILD, preferably one of the parents, MUST WEAR A LEAD APRON and, whenever possible, LEAD GLOVES.
4. Centre to the navel. Collimate further.
5. Expose when the child is not moving.



**Comments**

The person holding the child must wear a lead apron and lead gloves, whenever possible.

The whole abdomen (from diafragm to symfysis) must be included on the film.



## URINARY TRACT SURVEY, also NON ACUTE ABDOMEN    **Supine    BASIC**

### Cassette speed

Cassette with screen-film combination, nominal speed 200/400 in the cassette holder

### Cassette size

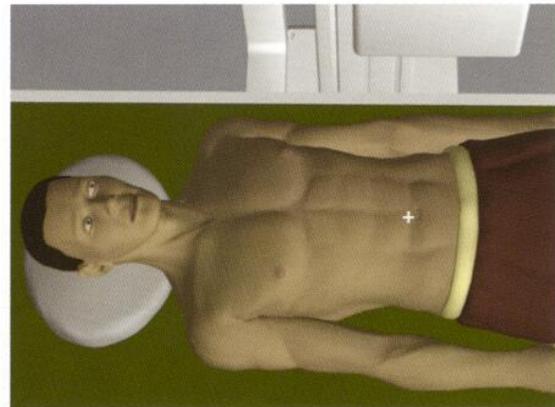
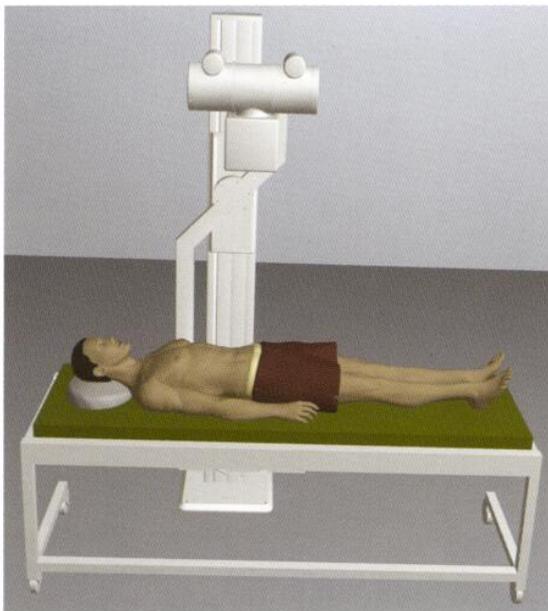
35×43 cm (14×17 inches)

24×30 cm (10×12 inches) for a child

Use a **Right** or **Left** marker

Exposure values	mAs (average)	
	"blue" system 200	"green" system 400/450
kV		
70	125	63
80 with contrast	63	32

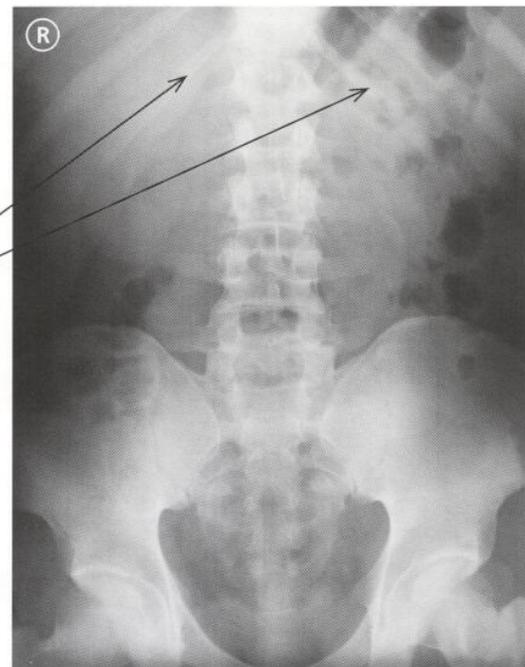
1. Bring in the patient, decide the cassette format and put the cassette in the cassette holder. Collimate to that format.
2. Position the patient. Put a small pillow under the head. Centre. Collimate further, if possible.
3. Tell the patient to breathe OUT and hold the breath OUT.
4. Expose.
5. Tell the patient to breathe normally.



### Comments

The lower ribs (the top of the kidneys) must be visible; if it is not, change the centre and take a new film.

The pubic symphysis must be visible; if it is not, take an ABDOMEN 6 (urinary bladder view).



**URINARY BLADDER and INNER PELVIS**    Supine – vertical beam angled 20° as shown  
**BASIC**

**Cassette speed**

Cassette with screen-film combination, nominal speed 200/400 in the cassette holder

**Cassette size**

24×30 cm (10×12 inches)

Use a **R**ight or **L**eft marker

1. Bring in the patient, put the cassette in the cassette holder. Collimate to the format.
2. Position the patient. Put a small pillow under the head. Centre 4 cm above the symphysis. Collimate further, if possible.
3. Tell the patient to hold the breath.
4. Expose.
5. Tell the patient to breathe normally.

Exposure values	mAs (average)	
	"blue" system	"green" system
kV	200	400/450
70	200	100
80 with contrast	100	50

