Crescent-shaped air collection under the diaphragm or in a non-dependent location on lateral decubitus films—best seen on the right where not obscured by stomach gas
Rigler’s sign (gas on both sides of the bowel wall making the serosal surfaces of the bowel easy to see)
Facial ligament sign (thin straight line from right upper quadrant to umbilicus, outlined by air)
Subphrenic abscess—circumscribed air collection above the liver which may have an air-fluid level
Gas in biliary tree—branching frond-like streaks of air—normal after sphincterotomy or after surgery; abnormal causes are fistula between biliary tree and bowel, ascending cholangitis
Portal venous gas—similar appearance to gas in biliary tree—seen with ischaemic bowel, including toxic megacolon and necrotising enterocolitis
Pneumotis intestinals—gas within the bowel wall; can progress to pneumoperitoneum; poorly understood and may be benign
Calcified costal cartilages
Atherosclerotic vessels (aortic, splanchic)
Phleboliths in clotted pelvic veins
Mesenteric lymph nodes
Prostate gland
Porcelain gallbladder
Pancreatic speckling in chronic pancreatitis
Uterine fibroid
Teratoma
Appendicolith
Renal parenchymal calcification—renal tubular acidosis, hyperparathyroidism, medullary sponge kidney
Stones:
• renal tract—from large complex staghorn calculi in the renal pelvis to single or multiple stones along the line of the ureter (along transverse processes, crossing the sacroiliac joints to run medial to ischial spines) and in the bladder
• biliary—less often radio-opaque

Liver—displacement of bowel gas away from the right upper quadrant
Spleen—displacement of bowel gas away from left upper quadrant
Kidneys—renal outline (between T12 and L2) enlarged (e.g. polycystic kidneys)

Small bowel—centrally located, mucosal valvulae conniventes cross the bowel wall, loops dilated >3 cm diameter
• Number of loops and air-fluid levels increases with more distal levels of obstruction
• Multiple air-fluid levels creates a ‘ladder’ appearance
• ‘Sentinel loops’—limited sections of dilated small bowel adjacent to inflammatory lesions (e.g. pancreatitis, appendicitis)

Large bowel—peripherally located, mucosal haustations only partially cross the bowel wall; gas contained within large bowel if the ileocaecal valve is competent; loops dilated >5 cm; caecum >8 cm

In mechanical obstruction may see a ‘cut-off’ sign—with the presence of faeces distal to the point of obstruction, an interface between the air-filled colon and solid matter is apparent

Faecal material has a mottled appearance

Sigmoid—single large ovoid dilated large-bowel loop fills the lower abdomen
Caecal—single large dilated large-bowel loop fills the left upper quadrant creating an ‘empty caecum’ sign

Grossly dilated large bowel (>8 cm diameter), usually transverse colon; oedematous bowel wall produces an indented mucosal appearance—‘thumb-print’ sign

Distended air-filled stomach seen with any cause of gastroparis

Diffuse hazy appearance to whole film with loss of clarity of structures

Biliary tree gas
Small bowel obstruction
Gallstone—usually large stones which fail to pass beyond the ileocaecal valve

Lytic lesions
Paget’s disease
Fractures—spinal fractures are easily missed if you don’t systematically look for them