abdomen, surgical approaches to, 64–66
abdominal aorta, 79
and abdominal aortic aneurysms, 74–79
anatomy, 53–54
bifurcation, 53
abdominal aortic aneurysms (AAAs), 74–79
aetiology, 74–76
asymptomatic, 76
development, risk factors, 76
diagnosis, 76–77
expansion, physiological mechanisms, 76
formation sites, 74
infrarenal
endovascular technique, 79
transperitoneal approach, 78
prevalence, 74
rupture, 77–78
rupture risk, size factors, 77
surgical approaches, 78–79
symptoms, 77
abdominal wall, 73
layers, 48
abdomino-perineal resection (APER), 136–137
acute appendicitis, 117–118
acute lower gastrointestinal haemorrhage secondary to diverticular disease, 111
acute pancreatitis
aetiology, 96
antibiotic therapy, 100
clinical features, 97
complications, 100
diagnosis, serum amylase in, 97
management, 99–100
markers, 97
modified Glasgow criteria, 97
scoring systems, 98
Ranson criteria, 98–99
severe attacks, features, 99
adenoma–carcinoma sequence, 120
adrenal arteries, 53
advancement flap
in fissure in ano treatment, 128
mucosal, 132
afterload
decrease, 16
definition, 14–15
airway management, mechanisms, 21–27
airways, definitive, 21
alimentary canal, embryological origin, 49
alveolar air, 26
alveolar dead space, 25
alveolar gas equation, 26
alveolar ventilation, 25
alveoli, and lung deflation, 27
Amsterdam criteria, revised, 120–121
anal canal
length of, 54
lymphatic drainage, 55
anal cancer, 134–136
anal malignancies, 134–137
anatomical dead space, 25
aneurysmal dilatation, of aorta, classification, 74
aneurysms, 30–31
see also abdominal aortic aneurysms (AAAs); thoracic aortic aneurysms (TAAs)
angle of Louis, anatomy, 13
anorectal junction, anatomy, 54
anterior abdominal wall, 47–48
antibiotic therapy, in acute pancreatitis, 100
anrectomy, 85–86
anus, 137
anteri thoracotomy, 28–29
antero-ventricular node (AVN), anatomy, 10
arterial pressure waveform, 18–19
asepsis, 5–6
Atlanta classification system, 99
atrial kick, 18
atrial natriuretic peptide (ANP), 19
atrio-ventricular nodal artery, 10
atrio-ventricular node (AVN), anatomy, 10
axilla, sentinel node biopsy, 45
axillary clearance, 45–46
axillary nodes, classification, 45
axillary ultrasound, breast cancer investigations, 42
banding, in haemorrhoid treatment, 129
baroreceptors, 19
bi-level positive airways pressure (BIPAP), 23
bi-lateral anterior sternotomy
biliary colic, clinical features, 92
biliary disease, classification, 92–93
biliary leaks, classification, 94
biliary tree, 105
bilirubin, 91–92
Billroth procedures, 85–86
biological agents, in colonic cancer management, 124
bipolar diathermy, 3
black pigment stones, 91
bladder, 61–62
bladder cancer, 144–147
bladder malignancies, 144–147
blood pressure (BP), 14
homeostatic control mechanisms, 19
blood volume, and central venous pressure, 21
bloodless fold of Treves, 117
blunt abdominal trauma, diagnosis, 106
blunt splenic trauma, conservative treatment, 106
Borrmann classification, for gastric cancer, 86
Bosniak classification system, 143
Botulinum toxin (Botox), in fissure in ano treatment, 128
breast
benign diseases, 38
benign and malignant diseases, 46
breast cancer, 39–43
distant metastases, 43–46
non-surgical management, 43–44
surgical treatment, 44–45
breast carcinoma see breast cancer
breast cysts, clinical features, 39
breast lumps
aetiology, 38
differential diagnosis, age factors, 38
investigations, 41
malignancy features, 39
breathing, mechanisms, 21–27
bronchi, 13
brown pigment stones, 91–92
bundle of His, anatomy, 11
Calot’s triangle, anatomy, 57
Camper’s fascia, 47
Campylobacter-like organism (CLO) test, 82
carbon dioxide partial pressure, 26
carcinoembryonic antigen (CEA), 104
cardiac cycle, 17–21
cardiac output (CO) increase, measures, 16
and myocyte stretch, 16
cardiovascular system, applied surgical physiology, 14–27
catgut sutures, 1
central venous pressure (CVP), 20–21
Charcot’s triad, 92
chemotherapy bladder cancer treatment, 147
breast cancer management, 43
colonic cancer management, 124
chest X-rays, thoracic aortic dissection investigations, 32
chlorhexidine, 5
cholecystectomy, 93
see also laparoscopic cholecystectomy
cholesterol stones, 91
chronic pancreatitis, 100–102
circumcision, 155
classic shell incision, 29
closed haemorrhoidectomy, 129–130
colonic axis, 53
colonic trunk, anatomy, 49–50
colon mesenteric support, 52
sites for diverticulae, 109
colonic cancer, 123–126
colonic malignancies, 121–122
colonic neoplasia, aetiology, 119–120
colonic tumours, surgical resection, complications, 126
colonoscopy, 110
in colonic malignancy diagnosis, 122
in ulcerative colitis, 114
colorectal cancer and familial adenomatous polyposis, 121
incidence, 119
TNM staging system, 124
colorectal malignancies, 119–126
colostomy, and ileostomy compared, 66
common bile duct (CBD), 57–58
common hepatic artery, 50
continence, maintenance mechanisms, 60–61
continuous positive airways pressure (CPAP), 22
controlled mandatory ventilation (CMV), 22
coronary artery dominance, 9
coronary circulation, 17–21
Crohn’s disease, 115–116
and ulcerative colitis compared, 111–112
CT pneumocolon, 122
CT scanning with IV contrast, thoracic aortic dissection investigations, 33
CT-KUB, 139
Cullen’s sign, 97
Dalton’s law of gases, 25
dead space, 25
DeBakey classification, 31, 32
deep inferior epigastric perforator (DIEP), flap, 46
deep inguinal ring, 67
defecation, 60–61
definitive airways, 21
Denovillier’s fascia, 53
dentate line, anatomy, 54–55
diagnostic peritoneal lavage (DPL), 106–107
diaphragm, 34–37
diaphragmatic herniae, 34–37
see also hiatus herniae
diathermy, 3–5
  see also bipolar diathermy; monopolar diathermy

dicrotic notch, in aortic pressure waveform, 17–18
disinfection, and sterilization compared, 5
distal pancreatectomy, 104
diverticulae, 109
diverticular disease, 109–115
  acute lower gastrointestinal haemorrhage secondary to, management, 111
  aetiology, 109
  complications, 109–110
  definition, 109
  diagnosis, 110
  management, 110
  presentation, 110
  prevalence, 109
diverticulitis, recurrence, 111
diverticulosis, perforation secondary to, classification, 111
double contrast barium enema (DCBE), 122
ductal carcinoma in situ (DCIS), 40
Dukes staging system, for colonic cancer, 123
dumping syndrome, 88
duodenal ulceration, 80–86
  Helicobacter pylori infection, 80–81
  pain characteristics, 81
EGC waveform, and cardiac cycle, 17
echocardiography, thoracic aortic dissection investigations, 33
elastance, 27
endoanal ultrasound (EAUS), in anal cancer diagnosis, 135
endoscopic therapies, for ulcer bleeding, 83–84
endovascular aneurysm repair (EVAR), 79
epiploic foramen, 49
Ethilon sutures, 1
ethylene oxide, 6
excitation–contraction coupling, 15
expiratory positive airways pressure (EPAP), 23
expiratory reserve volume (ERV), 25
external anal sphincter anatomy, 54
neurological supply, 55
external oblique muscle, 47
extra-corporeal shock wave lithotripsy (ESWL), 140
extra-hepatic biliary tree, anatomy, 57
false aneurysms, 30
familial adenomatous polyposis (FAP), 121
FAST see focused assessment for sonography in trauma (FAST)
2-FDG (2-fluoro-2-deoxy-d-glucose) PET-CT, 122
femoral canal, borders, 71
femoral herniae, 71–72
fibroadenomas, 38–39
Finney procedure, 85
fissure in ano, 127–128
fistula in ano, 130–132
  see also peri-anal fistulae
fistula plug, in fistula in ano treatment, 132
flexible sigmoidoscopy, 122
2-fluoro-2-deoxy-d-glucose (2-FDG) PET-CT, 122
focused assessment for sonography in trauma (FAST), 106–107
foramen of Winslow see epiploic foramen forset, 49–51
Frank–Starling relationship, 15
functional residual capacity (FRC), 23
fusiform aneurysms, 30
gallbladder, 57
gallbladder cancer, 95–96
gallbladder malignancy, 95–96
gallstone disease, 91–94
gallstone pancreatitis, scoring systems, 
Ranson criteria, 98

gallstones
and gallbladder malignancy
development, 95
types of, 91–92

gamma radiation, for sterilization, 6
gases, Dalton’s law of, 25
gastrectomy, total, procedure-specific
complications, 88
gastric cancer, 86–88
gastric ulceration, 80–86
benign, sites for, 82
pain characteristics, 81
genetic mutations, and pancreatic
cancer, 103
genitourinary system, 155
Glasgow criteria, modified, 97
Gleason scoring system, 148–149
Goligher classification, 128–129
gonadal arteries, 53
Goodsall’s rule, 130
Grey Turner’s sign, 97

haemorrhoidal artery ligation operation
(HALO), 130
haemorroidectomy, 129–130
haemorroidopexy, stapled, 130
haemorrhoids, 55, 128–130
‘Halstead’ radical mastectomy, 44
Hartmann’s pouch, 57
Hasselbach’s triangle, 68
Hasson technique, 6–7
heart
anatomical position, 9
Starling’s law of, 14–17
heart rate (HR), 14
Heineke–Miculicz procedure, 85

Helicobacter pylori
in duodenal ulceration, 80–81
eradication therapy, 83
and peptic ulcer disease, 80
tests, 82
herniae
laparoscopic repair, complications, 70

see also diaphragmatic herniae; femoral
herniae; hiatus herniae; inguinal
herniae; paraumbilical herniae;
umbilical herniae
hiatus herniae, 35–37
highly selective vagotomy (HSV), 85
Hinchey scoring system, 111
hindgut, anatomy, 52–53
horizontal fissure, 12
hormonal receptors, in breast cancer
tumour progression, 43
hormonal therapy, breast cancer
management, 44

ileal pouch–anal anastomosis (IPAA), 115
ileostomy, and colostomy compared, 66
ilioinguinal nerve, 68
implant reconstruction, 46
infection, in operating theatres, risk
reduction systems, 6
inferior mesenteric artery (IMA), 51–53
inflammatory bowel disease (IBD), 111–112
see also Crohn’s disease; ulcerative
colitis (UC)
infrarenal aortic aneurysms, 74
inguinal canal, 67–68
inguinal hernia repair
laparoscopic, 69
nerve risks, 70–71
options, 69–70
Lichtenstein technique, 68–69
inguinal herniae, 67–71
inguinal ligament, midpoint, 67
injection sclerotherapy, in haemorrhoid
treatment, 129
inspiratory positive airways pressure
(IPAP), 23
inspiratory reserve volume (IRV), 25
internal anal sphincter, 54–55
internal iliac artery, branches, 53–54
internal oblique muscle, 47–48
intra-thoracic pressure, and central
venous pressure, 21
intravenous uretograms (IVUs), 139
intrinsic reflex, 61
invasive ductal carcinoma (IDC), 40
invasive lobular carcinoma, 41
isovolumetric contraction, 17
Ivor–Lewis oesophagectomy, 89–90
jaundice, and bilirubin levels, 92
Jenkin’s rule, 66
juxtarenal aortic aneurysms, 74
K-ras oncogene, 120
Karydakis procedure, 134
kidney stones see renal calculi
kidneys, 155
KUB (kidney–ureter–bladder) radiography, plain, 139
laparoscopic appendectomy, complications, 118
laparoscopic cholecystectomy, 94
laparoscopic prostatectomy, 149
laparoscopic staging, in gastric cancer, 88
laparoscopy
basics, 6–8
contraindications, 8
hernia repair, complications, 70
inguinal hernia repair, 69
nerve risks, 70–71
options, 69–70
pneumoperitoneum, 6–7
vs. open surgery, 7–8
laparotomy, indications, 107
Laplace’s law, 27, 76
large bowel, 126
lateral sphincterotomy, in fissure in ano treatment, 128
latissimus dorsi flap, 46
lay open, in fistula in ano treatment, 132
left coronary artery, course of, 10
left thoraco-abdominal oesophagectomy, 90
lesser sac, 49
Lichtenstein technique, 68–69
Limberg procedure, 134
liver, 105
anatomy, 56–58
divisions, anatomical vs. functional, 57
lobes, vascular supplies, 57
posterior, peritoneal reflections, 56
surface markings, 57
lobular carcinoma in situ (LCIS), 41
Lockwood approach, to femoral hernia repair, 71
Lotheissen approach, to femoral hernia repair, 71–72
lower oesophageal sphincter (LOS), 60
lumbar triangle of Petit, 48
lumbar vertebrae, pelvic metastases, 54
lung compliance, 26–27
lung deflation, alveoli and, 27
lung fissures, surface markings, 12
lungs
blood supply, 13
surface markings, 12
lymph nodes
and anal cancer, 136
and breast cancer, 42–43
and gastric cancer, 87
Lynch syndrome, 120
McEvedy approach, to femoral hernia repair, 72
McKeown oesophagectomy, 90
magnetic resonance imaging (MRI)
in anal cancer diagnosis, 135
breast cancer investigations, 41
thoracic aortic dissection investigations, 33
marginal artery of Drummond, anatomy, 52
mastectomy, 44–46
Mayo technique, 72–73
mean arterial pressure (MAP), definition, 18
mechanical ventilation complications, 23
indications, 21
Meckel’s diverticulum, 117
median sternotomy, 28–29
mediastinoscopy, chest access during, 29
mediastinum, 37
mesh repair, 73
metallic sutures, 1
micturition, 61–63
mid inguinal point, 67
midgut, 51–52
midline laparotomy incisions, 65–66
minute ventilation, 25
mitral valve, anatomy, 10
mixed cholesterol and pigment stones, 92
modified radical mastectomy, 44
monoclonal antibody therapy, breast cancer management, 44
monopolar diathermy, 3
contraindications, 5
MRI see magnetic resonance imaging (MRI)
mucosal advancement flap, in fistula in ano treatment, 132
muscle stimulation, diathermy and, 3
myocardial contractility, increase, 16
myocyte stretch, and cardiac output, 16
natural sutures, 1
needles, types of, 2
neo-adjuvant therapy, for renal cancer, 124–125
nephrolithiasis, medical treatment options, 140
nephron sparing surgery, 144
NHS Bowel Cancer Screening Programme (UK), 123
Nissen’s fundoplication, techniques, 37
nuclear scanning, breast cancer investigations, 42
nylon sutures, 1
oblique fissure, 12
oblique sinus, anatomy, 9
oesophageal cancer, 88–90
oesophagus, 90
omental bursa see lesser sac
Onuf’s nucleus, 63
open haemorrhoidectomy, 129
open repair of abdominal aortic aneurysms (oAAA), 78
and endovascular aneurysm repair compared, 79
open surgery, vs. laparoscopy, 7–8
open and laparoscopic ureterolithotomy, 141
operating theatres, infection risk reduction, 6
OptiView ports, 7
orchidectomy, 152
testicular cancer vs. acute torsion, 154–155
orchidopexy, 152
oversewing, peptic ulcers, 85
oxygen partial pressure of, 26
oxygenation, improvement methods, 22–23
p53, 120
pacemakers and diathermy, 5
pan-proctocolectomy with end ileostomy, 114–115
pancreas, 105
blood supplies, 58
pancreatic cancer, 102–104
pancreatic malignancy, 102–105
pancreatoduodenectomy, 104
pancreatitis, 96–102
see also acute pancreatitis; chronic pancreatitis
paraumbilical herniae, 72–73
parietal cell vagotomy, 85
Park’s classification, 131–132
partial nephrectomy, 144
partial pressure, 26
‘Patey’ radical mastectomy, 44
pelvic metastases, spread, 54
pelvic venous system, anatomy, 54
peptic ulcer disease aetiology, 80
complications, clinical features, 81
diagnosis, 81–82
elective surgery, 85–86
pharmacological management, 82–83
surgical interventions, indications, 84
peptic ulcers, oversewing, 85
peracetic acid, 6
percutaneous nephrolithotomy, 141
peri-anal fistulae, 131–132
pericardium, reflections, 9
peritoneal cavity
access to, 65
anatomy, 49
PET see positron emission tomography (PET)
photocoagulation, in haemorrhoid treatment, 129
phrenic nerve, anatomy, 11
physiological responses
to standing up, 16
to Valsalva manoeuvre, 16
piles see haemorrhoids
pilonidal disease, 133–134
pilonidal sinus, pathogenesis, 133
pilonidal sinus excision,
complications, 134
plain kidney–ureter–bladder (KUB) radiography, 139
pleura, 12
pneumoperitoneum, 6–7
polyamide sutures, 1
polydioxanone (PDS) sutures, 1
polyglactin sutures, 1
polypropylene sutures, 1
pontine micturition centre, 62–63
portal vein, anatomy, 51
porto-systemic anastomosis, sites of, 51
positive end expiratory pressure (PEEP), 23
positron emission tomography (PET)
breast cancer investigations, 42
colonic malignancy diagnosis, 122
posterior descending artery (PDA), 9
posterior thoracotomy, 28
posterolateral thoracotomy, 28
posture, and central venous pressure, 21
pouch of Douglas, 53
povidone iodine, 5
preload, definition, 14
pressure control, and ventilation, 22
pressure support ventilation (PSV),
22, 23
Pringle’s manoeuvre, 58
Prolene (polypropylene) sutures, 1
prostate, 147–151
prostate cancer
distant metastases, sites of, 150
Gleason scoring system, 148–149
histological subtypes, 147
lifetime risks, 147
non-surgical management, 149
presentation, 148
screening, 148
sites of, 147
prostate-specific antigen (PSA), 147–148
prostatectomy
laparoscopic, 149
robotic, 149
see also radical prostatectomy
pyloroplasty, 85
radiation, for sterilization, 6
radical cystectomy (RC), 146
radical mastectomy, 44
radical nephrectomy, 143–144
radical prostatectomy, 149–150
radiofrequency ablation and cryotherapy, 144
radiotherapy
bladder cancer treatment, 147
breast cancer management, 43
colonic cancer management, 124
Ranson criteria, 98–99
receptive relaxation, 62
recto-anal inhibitory reflex, 61
rectum, 137
blood supplies, 53
lymphatic drainage, 53
peritoneal relations to, 52
rectus abdominis, 48
rectus sheath, structures within, 48
recurrent laryngeal nerve, anatomy, 11–12
renal arteries, 53
renal calculi, 138–141
renal cancer
metastases, sites of, 142
neo-adjuvant therapy, 124–125
and varicoceles, 142
renal cell carcinomas, 142–144
renal cysts, classification, 143
renal malignancies, 142–144
renal stone disease, 139
renal stones see renal calculi
renin-angiotensin-aldosterone (RAA) system, 19–20
resection
in Crohn’s disease surgery, 116
see also abdomino-perineal resection (APER); transurethral resection of bladder tumours (TURBT); transurethral resection of the prostate (TURP)
residual volume (RV), 23
restorative proctocolectomy with ileal pouch-anal anastomosis, 115
retrograde intrarenal surgery (RIRS), 141
right coronary artery (RCA), 9–10
rigid sigmoidoscopy, 122
robotic prostatectomy, 149
Rockall score, 84

saccular aneurysms, 30
saline drop test, 7
saliva, 59
Scarpa’s fascia, 47
selective oestrogen receptor modulators (SERMs), 44
semicircular line of Douglas, 48
semilunar line, 48
sentinel node biopsy, 45
serum amylase, in acute pancreatitis diagnosis, 97
serum lipase, in acute pancreatitis diagnosis, 97
seton placement, in fistula in ano treatment, 132
silk sutures, 1
simple mastectomy, 44
sino-atrial nodal artery, 10
sino-atrial node (SAN), 10
skeletal muscle pump, and central venous pressure, 21
skin preparation, 5–6
small bowel, 90
sphincter mechanisms, 62
see also external anal sphincter; internal anal sphincter; lower oesophageal sphincter (LOS)
spinal cord reflexes, in defecation, 61
spirometry, traces, 23–25
spleen, 108
peritoneal attachments, 58
splenectomy procedures, 108
see also total splenectomy
splenic artery, branches, 50
splenic trauma blunt, 106
grading systems, 107
splenectomy, 108
surgical interventions, indications, 107
standing up, physiological responses, 16
Stanford classification, 31
stapled haemorrhoidopexy, 130
Starling’s law of the heart, 15–17
steel sutures, 1
sterilization, 5–6
stoma formation, 66–67
stomach, 90
blood supplies, 50
stomas, 66–67
Strasberg classification, 94
stricturoplasty, 116
stroke volume (SV), 14
subtotal colectomy and ileorectal anastomosis, 115
superior mesenteric artery (SMA), 51–53
suprarenal aortic aneurysms, 74
<table>
<thead>
<tr>
<th>Index</th>
<th>171</th>
</tr>
</thead>
<tbody>
<tr>
<td>surgactants, and lung compliance, 26–27</td>
<td></td>
</tr>
<tr>
<td>surgical approaches to abdomen, 64–66</td>
<td></td>
</tr>
<tr>
<td>to abdominal aortic aneurysms, 78–79</td>
<td></td>
</tr>
<tr>
<td>to chest, 29</td>
<td></td>
</tr>
<tr>
<td>to colonic cancer, 125–126</td>
<td></td>
</tr>
<tr>
<td>to fissure in ano, 128</td>
<td></td>
</tr>
<tr>
<td>to fistula in ano, 132</td>
<td></td>
</tr>
<tr>
<td>to gallbladder malignancy, 96</td>
<td></td>
</tr>
<tr>
<td>to haemorrhoids, 129–130</td>
<td></td>
</tr>
<tr>
<td>to oesophageal cancer, 89–90</td>
<td></td>
</tr>
<tr>
<td>to open appendectomy, 118</td>
<td></td>
</tr>
<tr>
<td>to pancreatic cancer, 104</td>
<td></td>
</tr>
<tr>
<td>to renal calculi, 140–141</td>
<td></td>
</tr>
<tr>
<td>to testicular torsion, 152</td>
<td></td>
</tr>
<tr>
<td>to thoracic cavity, 28–29</td>
<td></td>
</tr>
<tr>
<td>to ulcerative colitis, 114–115</td>
<td></td>
</tr>
<tr>
<td>surgical scrub solutions, 5</td>
<td></td>
</tr>
<tr>
<td>sutures, 1–2</td>
<td></td>
</tr>
<tr>
<td>swallowing, 59–60</td>
<td></td>
</tr>
<tr>
<td>synchronized intermittent mandatory ventilation (SIMV), 22</td>
<td></td>
</tr>
<tr>
<td>synthetic sutures, 1</td>
<td></td>
</tr>
<tr>
<td>systemic vascular resistance (SVR), 14</td>
<td></td>
</tr>
<tr>
<td>testicular cancer, 153–155</td>
<td></td>
</tr>
<tr>
<td>testicular malignancies, 153–155</td>
<td></td>
</tr>
<tr>
<td>testicular torsion, 151–152</td>
<td></td>
</tr>
<tr>
<td>orchidectomy, 154–155</td>
<td></td>
</tr>
<tr>
<td>testicular tumours, 153–154</td>
<td></td>
</tr>
<tr>
<td>thoracic aorta, disorders of, 30</td>
<td></td>
</tr>
<tr>
<td>thoracic aortic aneurysms (TAAs), 74</td>
<td></td>
</tr>
<tr>
<td>dissecting, 31</td>
<td></td>
</tr>
<tr>
<td>thoracic aortic dissection, 31–33</td>
<td></td>
</tr>
<tr>
<td>thoracic cavity surgical approaches to, 28–29</td>
<td></td>
</tr>
<tr>
<td>thoraco-abdominal aortic aneurysms, 74</td>
<td></td>
</tr>
<tr>
<td>thoracolaparotomy, 29</td>
<td></td>
</tr>
<tr>
<td>thorax applied surgical anatomy, 9–13</td>
<td></td>
</tr>
<tr>
<td>applied surgical physiology, 14–27</td>
<td></td>
</tr>
<tr>
<td>tidal volume (TV), 23</td>
<td></td>
</tr>
<tr>
<td>TNM staging system in breast cancer, 42–43</td>
<td></td>
</tr>
<tr>
<td>in colorectal cancer, 124</td>
<td></td>
</tr>
<tr>
<td>in gallbladder cancer, 95–96</td>
<td></td>
</tr>
<tr>
<td>in pancreatic cancer, 104</td>
<td></td>
</tr>
<tr>
<td>in renal cell carcinomas, 143</td>
<td></td>
</tr>
<tr>
<td>in testicular tumours, 154</td>
<td></td>
</tr>
<tr>
<td>total extra-peritoneal (TEP) repair, 69–70</td>
<td></td>
</tr>
<tr>
<td>total lung capacity, 23</td>
<td></td>
</tr>
<tr>
<td>total pancreatectomy, 104</td>
<td></td>
</tr>
<tr>
<td>total splenectomy complications, 108</td>
<td></td>
</tr>
<tr>
<td>trans-hiatal oesophagectomy, 90</td>
<td></td>
</tr>
<tr>
<td>transabdominal pre-peritoneal (TAPP) repair, 69</td>
<td></td>
</tr>
<tr>
<td>transperitoneal approach, to infrarenal abdominal aortic aneurysms, 78</td>
<td></td>
</tr>
<tr>
<td>transpyloric plane of Addison, 50–51</td>
<td></td>
</tr>
<tr>
<td>transurethral resection of bladder tumours (TURBT), 145–146</td>
<td></td>
</tr>
<tr>
<td>transurethral resection of the prostate (TURP), 150</td>
<td></td>
</tr>
<tr>
<td>transurethral resection (TUR) syndrome, 150</td>
<td></td>
</tr>
<tr>
<td>transverse rectus abdominis muscle (TRAM), 46</td>
<td></td>
</tr>
<tr>
<td>transverse sinus, anatomy, 9</td>
<td></td>
</tr>
<tr>
<td>transversus abdominis, 48</td>
<td></td>
</tr>
<tr>
<td>trastuzumab, 44</td>
<td></td>
</tr>
<tr>
<td>triangle of doom, 70</td>
<td></td>
</tr>
<tr>
<td>triangle of pain, 70</td>
<td></td>
</tr>
<tr>
<td>triple test, 41</td>
<td></td>
</tr>
<tr>
<td>true aneurysms, 30</td>
<td></td>
</tr>
<tr>
<td>truncal vagotomy, 85</td>
<td></td>
</tr>
<tr>
<td>trunk applied surgical anatomy, 58</td>
<td></td>
</tr>
<tr>
<td>applied surgical physiology, 63</td>
<td></td>
</tr>
<tr>
<td>ulcerative colitis (UC) aetiology, 112</td>
<td></td>
</tr>
<tr>
<td>autoantibodies, 112</td>
<td></td>
</tr>
<tr>
<td>colonoscopic screening, 114</td>
<td></td>
</tr>
<tr>
<td>and Crohn’s disease compared, 111–112</td>
<td></td>
</tr>
<tr>
<td>extracolonic manifestations, 113</td>
<td></td>
</tr>
<tr>
<td>histological features, 113</td>
<td></td>
</tr>
<tr>
<td>macroscopic features, 113</td>
<td></td>
</tr>
</tbody>
</table>
ulcerative colitis (UC) (cont.)
management, 113
prevalence, 112
surgery, 114
surgical approaches, elective, 114–115
ulcers
benign vs. malignant, 82
visible bleeding, endoscopic therapies, 83–84
see also duodenal ulceration; gastric ulceration; peptic ulcer disease
ultrasound
axillary, 42
endo-anal, 139
in renal stone disease diagnosis, 139
umbilical herniae, 72–73
see also paraumbilical herniae
United States Pharmacopeia (USP), suture sizes, 2
upper gastrointestinal tract malignancies, 86–88
urea breath testing, 82
ureteroscopic lithotripsy (URS), 140–141
urinary calculi see renal calculi
urinary tests, in bladder cancer diagnosis, 145
urinary tract malignancies, 142–144
bladder, 144–147
urothelial tumours, 144–147
vagotomy, 85–86
vagus nerve, anatomy, 11
Valsalva manoeuvre, 16–17
varicoceles, and renal cancer, 142
venous tone, and central venous pressure, 21
ventilation
alveolar, 25
basic modes of, 22
mechanisms, 21–27
minute, 25
non-invasive methods, 22–23
see also mechanical ventilation
Veress needles, 7
Vicryl/Vicryl Rapide (polyglactin) sutures, 1
vital capacity (VC), 23
volume control, and ventilation, 22
Whipple’s procedure, 104
complications, 105
wide local excision (WLE), 44