

Index

A

- Actinomyces, 102, **102**, **103**, 215, **223**
IUD and, 102, 152, **164**
- Adenocarcinoma, **94**, **107**. *See also* specific types and sites
cervical/endocervical, 124-130, **127**, **128**, **129**, **130**, 218
adenoid basal, 135, **135**
adenoid cystic, 134
adenosquamous, 134, **134**
adenoma malignum, 131, **132**
clear cell, 133, **133**
colloid, 132
cytology, 126-129, **127**, **128**, **129**, **130**
differential, 123
vs endometrial, 129, **129**
vs in situ, 140
endometrioid, 133
glassy cell, 134, **135**
in situ, 135-140, **153**, 217
cytology, 137, **137**, **139**, **153**, **187**, 217, **231**, **232**
differential, 140, 143, **153**
histology, 137, **137**
variants, 138-140, **139**
intestinal-type, 132, **132**
microinvasive, 143, **143**
mesonephric, 133, **134**
minimal deviation, 131
serous, 133
signet ring cell, 132
variants, 130-135
villoglandular, 131, **130**, **131**, **183**
endometrial, 119-124, **129**, 218, **232**
clear cell, 123, **125**
cytology, 120-124, **120**, **121**, **122**, **123**, **124**, **125**, **129**, **232**, **233**
mucinous, 124
neutrophils and, 121, **121**, 123, 130, 218, **232**
poorly differentiated (high grade), **120**, **121**, 122, **122**, **123**, **232**, **233**
risk factors, 118
secretory, 124, **125**
serous, 123, **124**
squamous differentiation, 123, **124**
type I, 119, 218
type II, 120, 218
variants, 123-124, **124**
watery diathesis, 121, **121**, 122, 218
well differentiated (low grade), **120**, **121**, 122, **122**
metastatic, 152, **153**, **181**, **183**, **188**, **233**
mucinous, 124
secretory, 124, **125**
villoglandular, 124
- Adenocarcinoma in situ, cervical/endocervical, 135-140, 217
cytology, 137, **137**, **139**, **153**, **187**, 217, **231**, **232**
differential, 140, **153**
histology, 137, **137**
variants, 138-140, **139**
- Adenofibroma, 178
- Adenoid basal cell carcinoma, 135, **135**
- Adenoid cystic carcinoma, 134
- Adenoma malignum, endocervical, 131, **132**
- Adenomatous hyperplasia, endometrial, 118, 119, 120
- Adenosarcoma, 178
- Adenosquamous carcinoma
endocervical, 134, **134**
endometrial, 123, **124**
glassy cell, 134, **135**
in situ, 140
- Adequacy follow-up recommendations of, 200
- Adipose tissue, 21
- Adrenal gland/hormones, 19, 20, 21, 22, 23, 119, 166
- Age
cervical cancer, 72
at first coitus, 70
- AGUS. *See* Atypical glandular cells
- AIDS, cervical cancer defining illness, 87, 100. *See also* HIV infection
- Air-dried cells, 20
- Allergic vaginitis, 91
- ALTS. *See* ASCUS/L SIL triage study
- Alveolar soft part sarcoma, 177
- American Society for Colposcopy and Cervical Pathology (ASCCP), 145, 200, 201, 234, 242
- Amoeba, 108, **108**, 164
IUD and, 164, **164**
- Androgen, 9, 19, 20, 21, 119
- Androgenic atrophy, 20, **20**, 22, 215, **222**
- Androstenedione, 9, 21
- Aneuploid, 52, 56, 61, 76, 84-87, 141, 160, 216
- Anorexia nervosa, 19
- Anucleate squames, **29**
bacterial vaginosis, 101
diethylstilbestrol, 161
fetal, 170
hyperkeratosis, 27, 28, 29, **29**, 215
keratinizing carcinoma, 46
neovagina, 190
- Apoptosis, 83, 84, 113, **114**, 115, 129, 132, 138, **139**, 141, 142, 145, 150, 152, 174, 217
- Arias-Stella reaction, 152, **153**, 160, 162, 166, **167**, 215
- Artifacts
algae, 192
brush, 148, **149**, 186, **187**
cardboard, 192, **193**
carpet beetle parts, 192, **193**
collagen balls, 192, **193**
cone biopsy, 150, **151**, 186, **187**, 197
cornflakes, 28, **29**
fluorescent dyes, 192
glove powder, 192, **193**
heat, 161, **161**
lubricant, 192, **193**, 197, 199, 215
miscellaneous, 192
plant, 192, **193**
spray fix, **193**
technical, 198
thermal, 161, **161**
tampon fibers, 192
- Aromatase, 21, 119
- ASCUS. *See* Atypical squamous cells

- ASCUS/L SIL Triage Study, 64, 65, 210, 240
- Asperite, 49, 50, **51**, **65**, 66
- Atrophic vaginitis, **20**, **43**, 67, 215
- Atrophy, 19, **20**, **43**, 67, **68**, **185**, **186**, **209**, 215, **221**, **222**
 androgenic, 20, **20**, 22, 50, 215, **222**
 atypia of, 66-68, **67**, **69**, 184, **187**
 with inflammation, **20**, **43**, 67, 215, **221**
 vs metaplasia, 26
 parabasal predominant Maturation Index, 19, **20**
 postmenopause, 19
 postpartum, 19
- Atypia of atrophy, 66-68, **67**, **69**, 184, **187**
- Atypia of maturity, 66, 69, **69**
- Atypical endocervical cells, 145, **145**, 186, 219, **230**
- Atypical endometrial cells, 117, 123, 145, 217, **230**
- Atypical glandular cells, 144-153, 145, 217
 differential, 146-153
 endocervical, 145, **145**, 186, 217, 219, **230**
 endometrial, 117, 123, 145, 217, **230**
 management, 201, 242
 undetermined significance, 144
- Atypical immature metaplasia, 52
- Atypical parakeratosis, **29**, 65, **65**. *See also* Atypical squamous cells
- Atypical repair, 66, **66**. *See* Atypical squamous cells
- Atypical reserve cell hyperplasia, 33
- Atypical squamous cells, 59-69, 216, **228**, **229**
 atypia of atrophy, 66-68, **67**, **69**, 184, **187**
 atypia of maturity, 66, 69, **69**
 atypical parakeratosis, **29**, 65, **65**
 atypical repair, 66, **66**, 252, **252**
 atypical squamous metaplasia, 60, **60**, **63**, **229**
 "candy" ASC-US, 61, **61**, 106
 cannot exclude high grade SIL (ASC-H), **61**, 62, **62**, **63**, 217, **229**
 hyperchromatic crowded groups, 62, **63**
 irreproducible result, 63-65
 management, 200, 201, 242
 minimal dysplasia, 59-61, **61**
 significance of, 60
 squamous atypia, 59, **60**, **228**, **229**
 undetermined significance (ASC-US), **60**, 61, **61**, **62**, 217, **228**, **229**
- Atypical squamous metaplasia, **60**, **63**, 69, **229**. *See also* Atypical squamous cells
- Ayre
 J. Ernest, 7, 76, 188
 spatula, 7, 198, 207
- B**
- β-human chorionic gonadotropin, 179
- Babès, Aurel, 6
- Bacteria, 100-105. *See also* specific types/infections
 Bacillus vaginalis, 89, **90**, **222**
 "BV" organisms, 100
 Chlamydia, 103
 clinical diagnosis of, 100
 "cocoid," 101
 Döderlein, 17, 18, 89, **90**, **222**
 Gardnerella vaginalis (Haemophilus vaginalis), 100
 Lactobacilli, 17, 18, 89, **90**, 103, **222**
 Leptothrix, 102, **102**, 107
 Mobiluncus, 100
 normal flora, 89, **90**
- Bacterial vaginosis, 100, **101**, **223**
- Balloon
 cells, 50, **51**
 dogs, 105, **105**, **223**
- Barr body, 23, **23**
- Basal cells, 14, **16**
- Basket-weave pattern, **16**, 50
- Basement membrane
 of glandular epithelium, 135
 of squamous epithelium, 16, 25, 30, 37
 of stroma, 196
- Behçet disease, 95
- Benign cellular changes, 234, 237, 238, 239
- Benign diathesis. *See* Diathesis
- Benign glandular cells, posthysterectomy, 188, **189**, 241
- Benign proliferative reactions, 24, 28
- Bentham, Jeremy, 236
- Bethesda System (TBS), 8, 234-241
 2001 revisions, introduced, 234
 adequate endocervical/transformation zone component, 237
 adequate squamous cellularity, 236
 adequacy, 234, 236
 ancillary testing, 238
 atypical glandular cells, 240
 atypical squamous cells 239
 cannot exclude high grade SIL, 240
 undetermined significance, 240
 automated review, 238
 categorization 237
 cell abnormalities, 238
 consensus conferences, 8, 234
 diagnostic uncertainty, 61
 educational notes, suggestions, 241
 epithelial cell abnormality, 238, 239
 formula to determine adequacy, 236
 "frame" shifts to new technologies, 54
 general categorization, 237
 hyperchromatic crowded groups, 182
 HPV cross referenced/integrated reporting, 238
 interpretation of ASC, 61
 glandular cell abnormalities, 240
 implementation of, 63
 inflammation vs genuine neoplasia, 69
 interpretation/result, 238
 other malignant neoplasms, 241
 negative for intraepithelial lesion or malignancy, 238
 other non-neoplastic findings, 239
 organisms, 238
 other, under general category, 238, 239
 overview of reporting format, 234
 "quality indicators," 234
 "reference images," 236, **endpapers**

report format, 241
 reporting HPV, cross referenced and integrated, 238
 specimen adequacy, 234, 236
 specimen type, 234
 squamous cell carcinoma, 240
 squamous intraepithelial lesions, 8, 54, 240
 standardizing reporting, 8, 234
 technical interpretability, 237
 terminology, 54, 234, 235
 transformation zone, 239
 unsatisfactory specimens, 236

Biopsy. *See* Cone biopsy

Biphasic pattern, 148, **149**, 178, 186, 217, **231**

Bird's eyes, 39, **40**

Birth control pills. *See* Oral contraceptives

Bizarre cells, **45**, 46, 67, 68, 69, 98, 157, **157**, **228**

Bland cells, 57, 93, **208**

Blue blobs, 19, 20, 68, **68**

Boosted CIN lesions, 52, 56

Brains in bottles, 13, 57, 216, **226**. *See also* Raisinoid nucleus

Breast cancer, metastatic, **153**, 181, **183**

Broders grading, 4, 42, 53

Brush artifact. *See* Artifacts

C

Cadherins, 172

Candida, 105, **105**, 215, **223**

Candy ASC-US, 61, **61**, 106

Cancer prevention
 diet, 88
 primary, 2, 220

CAP Survey, 63

Cannonballs, 91, **107**

Capillary, 4, 97, **97**, 98, 148, 149, **149**, 150, 196

Carcinogenesis, 23, 75
 alternate theory of, 76
 basic concepts, 13
 benign proliferative reactions, 24, 28
 cofactors, 86-89
 diagnostic concepts, 23
 human papillomavirus (HPV), 83
 molecular model of cervical, 85
 morphology dysplasia, CIS, 30-32
 pathogenesis of, 75
 prevention, 2, 88, 220
 recognizable pattern of development, 23
 risk factors in, 70
 squamous carcinoma, 23
 synopsis, 12
 traditional view of, 76

Carcinoid tumor, 174
 atypical, 175

Carcinoma. *See also* specific types and sites
 adenocarcinoma
 endocervical, 218
 variants, 130-135. *See also* Adenocarcinoma, specific entities
 endometrial, 218
 variants, 123. *See also* Adenocarcinoma, specific entities
 fallopian tube, 188, **189**
 metastatic, **153**, 181, **181**, **183**
 neuroendocrine, 173, **174**, **183**, **188**
 persistent vs recurrent, 159
 residual, 158
 small cell
 neuroendocrine, 173, **174**, **183**, **188**
 squamous, 44, 44. *See also* Squamous cell carcinoma
 spindle cell, 48, **48**
 squamous cell, 41-47, 216. *See also* Squamous cell carcinoma
 variants, 47-48. *See also* specific types

Carcinoma in situ, 28, 55-59, 152, 182, 216. *See also* Squamous intraepithelial lesion
 age and, 67, 72
 classic, 184, **185**
 cytology, **31**, 32, **32**, **26**, **185**, **187**, **209**, **227**
 definition of, 55
 vs dysplasia, 32, 56
 glands in, **33**, **41**, **153**, **185**
 histology of, 55
 intermediate cell, **31**, **32**, 34
 invasion not excluded, 37, 40, 240
 keratinizing, 37
 large cell, 36, **36**, **185**
 mimickers, 58
 mitoses, 31, 56, **185**, **209**
 morphology, 30-32
 natural history, 74
 nouveau, 182, **185**
 nucleoli, 32, **41**, **185**
 precursor to invasive SCC, 39, 76
 progression of, 74
 secret of, 58
 small cell, 33, **33**

Carcinofibroma, 178

Carcinosarcoma, 177, **178**

Cautery, 94. *See also* Artifact, heat

Cellular adherence, 55

Cellularity
 criteria for adequacy, 236. *See also* Bethesda System
 dysplasia and, 56
 endometrial vs endocervical carcinoma, 140
 estimating, 237, **endpapers**
 factors influencing, 197
 false negatives, 208
 formula, 237
 keratinizing dysplasia vs carcinoma, 46
 specimen adequacy, 236,

Cell clue cycle, 101
 theory of, 5

Cells. *See* specific type

Cercariform cells (pollywogs), 182, **183**

Cervical adenocarcinoma, 124-130, **127**, **128**, **129**, **130**, **131**, 218. *See also* specific entities

- adenoid basal, 135, **135**
 - adenoid cystic, 134
 - adenosquamous, 134, **134**
 - adenoma malignum, 131, **132**
 - cell of origin, 125
 - clear cell, 133, **133**
 - colloid, 132
 - cytology, 126-129, **127, 128, 129, 130, 218, 232**,
 - differential, 129
 - vs endometrial, 129
 - vs in situ, 140
 - endometrioid, 133
 - epidemiology, 125
 - glassy cell, 134, **135**
 - histology, 126
 - human papillomavirus and, 125
 - incidence, 124
 - in situ, 135-140, **153, 217**
 - cytology, 137, **137, 139, 153, 231, 232**
 - differential, 140, 143, **153**
 - histology, 137
 - variants, 138-140
 - intestinal-type, 132, **132**
 - mesonephric, 133, **134**
 - microinvasive, 143, **143**
 - minimal deviation, 131, **132**
 - risk factors, 125
 - serous, 133
 - signet ring cell, 132
 - variants, 130-135
 - villoglandular, 131, **130, 131, 183**
- Cervical intraepithelial neoplasia (CIN). *See also* Dysplasia, Carcinoma in situ, Squamous intraepithelial lesion
- boosted, 52, 56
 - grading, 56
 - thin CIN, 56
- Cervical mucus, ferning, 189, **191**
- Cervicitis
- follicular, 97, **97**
 - granulomatous, 97, **98**
 - mucopurulent, 103
 - tuberculous, 104
- Cervicovaginal epithelium
- and antibiotics, 21
 - and drugs, 21
 - and obesity, 21
- Cervix, 10. *See also* Cervical, Cervicitis
- cleaning of, 197
 - histology, 14, **16**
- Chalones, 75
- Chemotherapy cytology, effect, **147, 160, 160**
- Chestnut burs, 169
- Chlamydia*, 103, **104**
- cervical cancer, 103
 - vacuoles, 104, **104**
- Chloroma, 180, **180**
- Choriocarcinoma, 178, **179**
- Chromatin,
- irregular, 31, 39, 40, **40, 45, 45, 46, 118, 120, 127, 128, 128, 184, 186**
 - pale, 57, 93
 - red, 93, **93**
 - smudgy, 50, 68
 - texture, 40
- Chromatolysis, 93, 157
- Chromosome, 86, 87. *See also* Barr body
- Cigarette smoking, 19, 71, 88, 100, 125, 190, 220, 238
- Cilia/ciliated cells
- adenocarcinoma in situ, 140
 - carcinoma, 124, 133, 140
 - endocervical, 110, 111
 - fallopian tube, 188
 - tubal metaplasia, 115, 150, **151, 186, 187, 188, 217, 231**
- Ciliocytophthoria, 192, **193**
- Circumcision, 70
- Cirrhosis, 21, 22
- Classification systems, 53
- Bethesda (TBS), 54
 - CIN, 54
 - DeMay, 53, 202
 - Papanicolaou, 54
- Clear cell adenocarcinoma, 123, **125, 133, 183, 183**
- Clinical Laboratory Improvement Act of 1988 (CLIA), 8
- Clinical management, 196-197
- ASC recommendations, 199
 - guidelines, 200, 236, 243
 - and Pap test, 129, 200
 - and practice standards, 211
 - and screening, 198
- Clue cells, 100, 101, **101, 215, 223**
- Cobblestone pattern, **24, 25, 26, 26, 27, 27, 28, 34, 215, 222**
- Coccobacilli, coccoid bacteria, **43, 101, 101, 102, 103, 104, 107, 215, 238**
- Cocklebur, 168, **169**
- Cofactor, cervical cancer, 86-89
- Coitus, 70, 71, 72, 86. *See also* Sexual activity
- Cokeromyces, 106, **106**
- Collagen balls, 192, **193**
- Colorectal
- carcinoma, 132, 181, **183, 233**
 - cells, 190, **191**
- Colposcope
- invention of, 4
- Colposcopy
- and cone biopsy (LEEP), 196
 - conization, 41, 137, 150, 196, 210
 - and laser ablation, 197
 - and lesion visualization, 196, 207
 - false negative, 196, 206, 219
- Condyloma (genital warts), 49, 52
- acuminatum, 49
 - asperites, 49, 50, **51, 65, 66**
 - atypical, 52
 - differential, 52
 - vs dysplasia, 52
 - endophytic, 49
 - epidemiology of,
 - flat, 49, **49**
 - histology, 49, **49**
 - human papillomavirus and, 49
 - interpretive criteria, 49
 - koilocytes, 13, 49, **49, 77, 79, 94, 216, 225, 226**
 - as low grade SIL, **49, 52, 225, 226**
 - minor criteria, 50
 - penile, 70
 - planum, 49
 - spike, 49, 66

Condylomatous squamous cell carcinoma, 47, **47**

Cone biopsy

- artifact, 150, **151**, 186, **187**, 197
- cold knife cone, 196
- indications for, 196
- LEEP (LLETZ), 196

Contraceptives. *See also* Hormonal cytology, HPV, Oral contraceptives

- barrier methods, 70, 90
- cervical cancer and, 70, 88
- condom and cancer risk, 70, 71
- contraceptive devices, 71
- diaphragm, 70
- IUD changes 70, **151**, 152, 163, **163**, 164, 183, 217, **231**
- long acting
 - Depo-Provera®, 19, 162
 - Norplant®, 19, 162
- oral. *See* Oral contraceptives
- risk factor for cancer, 70
- spermicides, 71

Conference(s)

- Commonwealth Fund, 6
- First National Cytology Conference, 7
- Gynecologic Society of Bucharest, 6
- Third Race Betterment, 5

Cornflake artifact, 28, **29**

Corpus luteum, 9, 18, 22, 166

Cotton swab, 197, 198, 199, 207

Crabs, 108, **108**

Cracked cells, 50

Cryotherapy, 197

Curschmann spirals, 189, **191**

Cytolysis, 17, **17**, 21, 89, **90**, 215, 238

Cytomegalovirus, 99, **99**

Cytomegaly, 50, **51**, 156, **156**, 157, **157**, 159, 160, **160**, 172, **172**, 215, 216, **225**

Cytoplasm, 13

Cytopreparation errors, 207

Cytotrophoblasts, 168, **168**, 178

D

Decidual cells, 162, **167**, 167, 215, **225**

Defensive medicine, 210

DES, 8, 113, 161. *See also* Diethylstilbestrol

Desmoplastic stromal response, 45, 126, 132

Desmosome, 16, 31, 172

Desquamation, 101, **101**

Detached ciliary tufts, 192, **193**

Diagnosis. *See also* Interpretation

- deciphering terminologies, 13, 53, 202
- interpretation vs, 238
- and reproducibility, 54, 63-65, 145, 146

Diathesis,

- benign, 43, **43**, 68, **221**, **222**
- clinging, 43, **43**, 215, 216, 218, **227**, **228**
- pseudodiathesis, **221**, **222**
- tumor, 38, 40, 42, **43**, 46, 128, **129**, 216, **227**, **228**
- watery, 121, **121**, 122, 218

Diet, cervical neoplasia and, 88

Diethylstilbestrol (DES), 8, 113, 161

- clear cell carcinoma and, 113

Dinosaurs, 2

Diploid, 52

Directly sampled endometrium, 148, **149**, 186, 217, 241

Disclaimers. *See* Educational notes

DNA

- hybrid/hybridization, 80
- ploidy, 52, 54, 56, 61, 65, 76, 84-87, 93, 141, 147, 148, 160, 167, 186, 190, 216
- synthesis, 85, 89, 156, 172

Döderlein bacillus, 17, 18, 89, **90**, **222**

Douches/douching, 71, 89, 90, 100, 199, 206

Dust

- artifact, 192
- bunnies, 102, **102**, **223**

Dyskaryosis, 59

- pale, 57, 93

Dyskeratocytes, **29**, **36**, 37, **37**, 50, **51**, 240

Dysplasia, 28, 55-59, 215-216. *See also* Carcinoma in situ, Cervical intraepithelial neoplasia, and Squamous intraepithelial lesions

- age and, 67, 72
- and carcinoma in situ, 28, 30-32, 55-59, 152
- CIN, SIL, 32
- cytology, **29**, 31, **35**, 55, **93**
 - mild dysplasia, **29**, **35**, **36**, **225**
 - moderate dysplasia, **35**, **226**
 - severe dysplasia, **30**, **35**, **226**, **227**
- definition, 55
- determining, 31
- differential
 - carcinoma in situ, 32
 - histiocytes, 34
 - inflamed degenerated metaplasia, 34
 - inflammatory change, 34
 - keratosis, 37
 - keratinizing squamous cell carcinoma, 37, 46
 - reserve cell hyperplasia, 33
 - squamous metaplasia, 33, 34, 36

distribution, 24

DNA ploidy, 52, 76

duration, 75

dysplastic cells, 31

epidemiology, 69-71

grading of, 31, 34, 56

histology, **30**, 55

human papillomavirus, 83-86

incidence/prevalence, 72

keratinizing, 32, 36, **36**, **37**, **47**, **51**

- vs squamous cell carcinoma, 37

liquid-based cytology, 216

management of, 200, 242

metaplastic, 32-36, **35**
 immature, 33, **35**
 mature, 34, **35**
 minimal, 59-61. *See also* Atypical squamous cells
 morphology, 30-32, 75
 natural history, 74
 nomenclature, 12, 13, 53-55, 201, 202
 nonkeratinizing, 36
 nuclear features, 31
 nucleoli, 31, **221**
 pathogenesis, 75
 pleomorphic, 37
 pregnancy, 37, 169
 progression, 74
 postradiation, 160
 recurrence, 74
 regression, 74
 secret, 58
 site, 75
 terminology, 12, 13, 53-55, 201, 202
 ultrastructure, 31

E

- Ectoplasm, 46
 Ectoplasmic rim, 26, 50
 Ectropion, 10, 24, 90, 161, 166
 Educational notes, 234, 235, 241, 253
 Papanicolaou Society of Cytopathology, 241
 Electron microscopy,
 dysplasia, 31
 human papilloma virus infection, 80, **80**
 Endocervical adenocarcinoma. *See* Cervical adenocarcinoma
 Endocervical adenocarcinoma in situ. *See* Adenocarcinoma in situ,
 cervical/endocervical
 Endocervical aspiration, 198
 Endocervical broom, 198, 199, 200, 207, 214
 instructions for use, 200, 214
 Endocervical brush, 110, 136, 146, 169, 196, 198-200, 207, 214
 artifact, 148, **149**, 186, **187**
 instructions for use, 199
 Endocervical cells, **24**, 110-114, **111**, **112**, 214, **221**, **229**, **230**
 atypical, 145, **145**, 186, 229, **230**
 ciliated, 110, **111**
 classic, **24**, 110, **111**, **112**
 endometrial cells vs, 115, 217, **230**
 high, **111**, 112, **146**, 147, **187**
 IUD effects on, 70, **151**, 152, 163-164, **163**, **183**, 217
 neoplastic. *See* specific entries
 neuroendocrine, 112
 nipple, 110
 oxyphilic, 112
 pencil-thin, 110, **111**, 161, **161**
 in pregnancy, 166. *See also* Arias-Stella reaction
 reactive, 112, **112**, **113**, **129**, 140, 144, 147, **147**, **229**
 secretory, 110
 specimen adequacy, 197, 237
 Endocervical curettage, 196, 198
 Endocervical glandular dysplasia, 140-143, **141**, **142**
 Endocervical glandular neoplasia, 135-144. *See also* specific entities
 Endocervical hyperplasia, microglandular, 113, **113**, **151**, 152, 162, 186, **187**
 Endocervical mucus, 90, 110, 112, 237
 Endocervical repair, 148, **149**
 Endocervical/transformation zone component, 237. *See also* Transition
 Endocervix. *See also* endocervical cells
 cytology. *See* endocervical cells
 histology, 10, 100
 Endometrial adenocarcinoma/carcinoma, 119-124, **120**, **121**, **122**, **123**, **124**,
 129, 218, **232**, **233**. *See also* Adenocarcinoma
 clear cell, 123
 cytology, 120-124, **120**, **121**, **122**, **123**, **124**, **129**, 218, **232**, **233**
 mucinous, 124
 neutrophils and, 121, **121**, 123, 130, 218
 poorly differentiated (high grade), **120**, **121**, 122, **122**, **123**, **232**, **233**
 risk factors, 118
 secretory, 124, **125**
 serous, 123, **124**
 squamous differentiation, 123, **124**
 type I, 119
 type II, 120
 variants, 123-124, **124**
 watery diathesis, 121, **121**, 122, 218
 well differentiated (low grade), **120**, **121**, 122, **122**, 232
 Endometrial cells, 114, **114**, **115**, **123**, **153**, **187**, **230**
 abnormal shedding, 116
 atypical, 117, **123**, 217, **230**
 cell balls, 114, **114**
 ciliated. *See* Tubal metaplasia
 directly sampled, 148, **149**, 186, 217, 241
 endocervical cells vs, 115, 217, **230**
 glandular, 114, **114**, **115**
 IUD effects on, 70, **151**, 152, 157, 163-164, **163**, **164**, **183**, 217
 naked nuclei vs, 116
 stromal (deep, superficial, histiocytes), 116, **116**, **117**, **149**, 217, **230**
 wreaths, 114, **114**, **230**
 Endometrial hyperplasia, 119-121, **120**
 adenomatous, 120, **120**
 atypical, 121
 cytology of, 120, **120**
 histology, 120
 Endometrial polyp, 117, 118, 123
 Endometrial stromal cells (deep, histiocytes, superficial), 116, **116**, **117**, 217
 Endometrial stroma sarcoma, 176, **176**, **233**
 Endometrioid cervical adenocarcinoma, 125, 126, 133
 Endometriosis, 117, 148, **149**, 186, 189
 Endometritis, 104, 148, **149**
 abnormal shedding, 117, 118
 atypical endometrial cells, 117, 123, 145, 223, 230
 puerperal, 170
 tuberculous, 104, 192
 Endometrium
 directly sampled, 148, **149**, 186, 217, 241
 histology, 114
 spontaneously shed. *See* Endometrial cells
Entamoeba gingivalis, 108, **108**, **164**
Entamoeba histolytica, 108, **108**
Enterobius vermicularis, 108, **108**

Eosinophils, 91, **91**
 in glassy cell carcinoma, 134
 in squamous cell carcinoma, 38, 42

Epidemiology, 69
 age, 72
 cervical neoplasia, 69
 incidence/prevalence, 72
 risk factor, cervical cancer, 70

Epidermodysplasia verruciformis, 76, 86

Epstein-Barr virus, 48, 88, 100

Errors, 204-207, 210-211, 218

Erythrocytes, 91

Escherichia coli, 172, 190

Estrogen
 effect, 21, **21**, 22, 118, 121, 122, 160, 218
 test, 68, **69**

Estrone, 21

Eve theory, 75

Exfoliative cytology, 6

Exodus, 22, 114, 116

Extrauterine malignancy, 181. *See also* Metastases

F

Failure of Pap tests, 204-211. *See also* chapter X

Fallopian tube, 10
 carcinoma of, 188, **189**
 cells, 188

False results, 204-206

Feathering, 128, 129, 130, 133, 137, 138, **139**, 143, 144, 146, **146**, 150, 186, 216

Female genital tract
 anatomy, embryology, 8

Ferning, of cervical mucus, 189, **191**

Fetal cells, 170

Fiber cells, 40

Filaments, differential, 102

Fistulae
 rectovaginal, 190, **191**
 vesicovaginal, 190, **191**

Flora. *See* Microorganisms

Foam cells, 118

Folate deficiency, 69, 89, 162, 170, 172

Follicle stimulating hormone, 9

Follicular center cells(s), 97

Follicular cervicitis, 97, **97**, **223**

Foreign body reaction, 97, **98**
 squamous cell carcinoma, 45
 suture, 98, **98**

Fungus, 105-106. *See also* specific organism
Candida, 105, 215, **223**
Geotrichum, 105

Funny looking cells, 59

Fun Park, LBC, 221-233

G

Gardnerella vaginalis, 100, 101. *See also* Clue cells

Geotrichum, 105

Gastric
 metaplasia in endometrium, 150
 metastatic, 182
 mucin and phenotype in adenoma malignum, 132

Genital warts. *See* Condyloma

Germ cell
 choriocarcinoma, 178, **179**
 embryology, 8
 tumors, 179

Gestational trophoblastic disease, 178

Giant cell histiocytes, 118

Glandular cells. *See also* specific entities
 benign, posthysterectomy, 188, **189**, 241
 endocervical. *See more at* Endocervical cells
 endometrial. *See more at* Endometrium cells

Glandular dysplasia, endocervical, 140-144, **141**, **142**

Glandular extension of CIS, 32, **33**, **41**, 184

Glandular neoplasia
 endocervical, early, 135. *See also* specific entities
 endometrial, 119. *See also* specific entities

Glassy cell carcinoma, 134, **135**

Glucocorticoid, 84

Goblet-like cells
 differential, 190
 intestinal-type carcinoma, 132
 posthysterectomy, 189

Gold standard, 54, 210, 219

Gonadal dysgenesis, 19, 23

Gonorrhea, 103

Granulation tissue, 98

Granulocytic sarcoma, 180

Granuloma/granulomatous
 cervicitis, 97, **98**
 foreign body, 97, **98**
 sarcoidosis, 98
 squamous cell carcinoma and, 45
 tuberculosis, 104
 Wegener, 98

Granulosa cell tumor, 119

Ground glass
 chromatin, 99, **99**, 167, 215, **223**
 cytoplasm, 134

Gupta body, 102, **102**, **223**

H

Haemophilus vaginalis, 100. *See also* Clue cells

Halo, 50-52, 92-95
 ASC-US, 62, **62**
 cells, 76-77
 glycogen, 50, **51**
 inflammatory, 50, 92-95, **94**, 215
 koilocyte (condyloma), 13, 49, **49**, 77, 79, **94**, 216, **225**, **226**
 metaplastic cell, 50
 superficial cell, 17
 "trich," 50, **51**, **94**, 107
 urothelial, 48
 viral, 99

- Heat artifact, 100, 161, **161**
- Heisenberg Uncertainty Principle, 74
- Hematoidin, 169
- Herpes infection/virus, 98, **99**, 215, **223**
and cervical cancer, 77, 88
vs reactive endocervical cells, 99, 112
- Herxheimer spiral, 46
- High grade squamous intraepithelial lesion (H SIL). *See also* Dysplasia, carcinoma in situ, Squamous intraepithelial lesions
- Hinsey, Joseph, 6
- Histiocytes, 91
epithelioid, 97, **98**
hemosiderin-laden, 91, 92, **92**, 118
increased activity, 118
lipid-laden, 118
multinucleated, 92, **92**, 118
sticky, 92, 116, **116**, 217
von Hansemann, 173
- Histo-Cyto correlation, 59, 65, 209
- History
condyloma, 76
human papillomavirus and cancer 76
Pap test, 2-8
- HIV (human immunodeficiency virus), 87, 100
- Hodgkin lymphoma, 180
- Hormonal cytology, 18-23. *See also* Maturation Index of pregnancy, 166
- Hormone replacement therapy, 69, 162
abnormal shedding endometrial cells, 117
naked nuclei, 116
- HPV. *See* Human papillomavirus
- HPV-Pap test, 218-220
- Human immunodeficiency virus (HIV)/infection, 87, 100
- Human papilloma virus (HPV)/ infection, 49, 75-86, 100. *See also* koilocytes, condyloma, and squamous intraepithelial lesion
adenocarcinoma, 125
adenocarcinoma in situ, 137
cervical carcinogenesis, 75, 83-86
clear cell carcinoma, 133
condyloma, 49
detection, 79-81
DNA hybridization, 80
epidemiology, 77-79
genome, 82
genotypes, 79
early and late genes, 83
high risk, 81
history, 2, 76
HPV types (6, 11, 16, 18), 82
immunocytochemistry, 80, **80**
integration of viral DNA, 83
koilocytes, 13, 49, **49**, 77, 79, **94**, 216, **225**, **226**
latent infection, 49, 78, 80, 81, 82, 83, 85
life cycle, 83
low risk, 81
microbiology, 79
molecular biology, 82
mortality rate, 7
negative SILs, cancer, 86
neovagina, 190
nonpermissive infection, 79, 80
oral contraceptive, 70
permissive infection, 79, 80
permissiveness of cell, 87
persistent, 78
polymerase chain reaction, 81
prevalence, 67
risk factors, 78
small cell carcinoma, 174
transient, 78
typing, 78
ultrastructure, 80, **80**
- Hybrid/hybridization, DNA, 80
- Hydatidiform mole, 178
- Hydrops tubae profluens, 188
- Hyperchromatic crowded groups, 58, **63**, 68, **127**, 182-188, **183**, **185**, **186**, **187**, 209, **209**, **223**, 250-252
- Hypergranulosis, 27, 28, **29**, 196
- Hyperkeratosis, 27, **29**, 215
and DES exposure, 161
- Hyperplasia. *See also* specific types and sites
endocervical
lobular, 132
microglandular, 113, **113**, **151**, 152, 162, 186, **187**
endometrial, 119-121, **120**
abnormal shedding, 117
adenomatous, 120, **120**, 121
atypical 120, 121
reserve cell, 25, **25**
atypical, 33
- Hypochromasia, hypochromatic, 57, 93, 156, 215
- Hypodiploid, 93
- Hypothyroidism, 19
- Hysterectomy,
benign gland cells following, 188, **189**, 234, 239
Pap test following, 198, 199
- /
- Icons, 13
- Immature metaplastic dysplasia, **30**, **31**, 33, **25**, **226**
- Immature squamous metaplasia, 25, **27**
- Immunocytochemistry, 80, 214
in human papilloma virus infection, 80
- Immunosuppressive drugs, 161
- Incidence of cervical cancer, 72
- Inclusions, 50, **99**, **223**
- Infection, 98-108. *See also* specific types
- Inflamed/degenerated squamous metaplasia, 34, **35**, 65

Inflammatory change, 89, 90, 92-95, **93**, **94**, **224**. *See also* specific infections
 atrophy with inflammation, **20**, 67, 215, **221**
 background features of, 94, **95**, **224**
 causes of, 90
 cells of, 91
 cytoplasmic features of, 94
 management of, 200
 nuclear features of, 93

In situ hybridization, for human papilloma virus detection, 52, 80

Intercellular

bridges, 16, 19, 25
 cohesion, 74
 junctions, 16, 31, 172. *See also* Desmosomes
 space, 19

Intermediate cells, **16**, 17, **17**, **21**, **23**, **221**, **222**
 importance of nucleus, 13, 215

Intermediate predominant Maturation Index, 20, **21**, **23**

Interobserver reproducibility

adenocarcinoma in situ, 136
 atypical squamous cells, 59, 61, 63-65, 209, 210, 240
 biopsy 8, 65
 condyloma vs CIN I, 52, 240
 glandular lesions, 136, 142, 143, 145, 146, 201, 241
 interpretive categories, 54-55
 papanicolaou system, 234
 precursor lesions, 8
 repair/regeneration, 95
 specimen adequacy, 234, 236
 squamous intraepithelial lesions, 210, 240

Interval protection, 198

Intestinal-type adenocarcinoma, 132, **132**

Intracytoplasmic lumen (ICL), 182, **183**

Intraepithelial lesion. *See* Squamous intraepithelial lesion, Dysplasia, Carcinoma in situ

Intraepithelial neoplasia. *See* Cervical intraepithelial neoplasia, Dysplasia, Carcinoma in situ

Intrauterine contraceptive device (IUD),

actinomyces, 102, 152, 163, **164**
 amoeba, 108, 164, **164**
 changes, effect, 70, **151**, 152, 163-164, **163**, **183**, 217
 IUD cells, 164, **164**, **231**
 metastasis vs, 182

J

Jail cells, 210. *See also* Litigation cells

Junction,

intercellular, 16, 31, 172
 squamocolumnar, 10, 24, **24**, 75, **111**, 125, 136

K

Karyorrhexis, 37, 52, 93, **93**, 113, 157

Keratin blebs, **45**, 46, **228**

Keratinization, 10, 27, 37, 40, 41, 44, 45, 46, 47, 48, 156, 157, 217

Keratinizing carcinoma in situ, 37

Keratinizing dysplasia, 36-37, **36**, **37**, **47**, **51**

grading, 75
 keratinizing squamous cell carcinoma vs, 37, 46

Keratinizing squamous cell carcinoma, 45-47, **45**, **46**, 216, **228**. *See also* Squamous cell carcinoma

keratinizing dysplasia vs, 37, 46

Keratohyalin granules, 27, 28, **29**, 196. *See also* Spiegelosis

Keratosis, 27. *See also* Hyperkeratosis, Parakeratosis

Kite

cells, 50, **51**
 trichomonas, 107

Koilocytes, 13, 49, **49**, 77, 79, **94**, 216, **225**, **226**

differential, 50, 94, **94**

discovery of, 76

L

Lactation, 19, 22, 166

Lactic acid, 17, 89, 100

Lactobacillus, 17, 18, 89, **90**, 103, **222**

Large cell

carcinoma in situ, 36, **36**, **185**
 lymphoma, 180, **180**
 neuroendocrine carcinoma, 175
 nonkeratinizing dysplasia, 36

Laser ablation, 197

LEEP, LLETZ. *See* Loop electrocautery excision procedure

Leiomyoma, 176, **176**

Leiomyosarcoma, 176, **176**

Leptothrix, 102, **102**, 107

Leukemia, 179, **180**

Leukoplakia, 27. *See also* Hyperkeratosis

Leukorrhea, 90

Liquid-based cytology, 214-233. *See also* specific entities

cytology, 214-218
 Fun Park, 221-223
 performance, 218
 SurePath, 214
 ThinPrep, 214

Litigation, 8, 54, 64, 182, 204, **208**, 210, 211, 218, chapter x

Litigation cells, **208**, 210, **250-252**, **254**, **257-260**

Loop electrocautery excision procedure (LEEP), 196, 197
 cytologic effects, 161, **161**

Lower uterine segment, 148, **149**, 217, **231**

Low-grade squamous intraepithelial lesion (L SIL). *See also* Dysplasia, Cervical intraepithelial neoplasia

Lubricant, lubrication, 192, **193**, 197, 199, 215

Lumen, intracytoplasmic, 182, **183**

Luteinized/luteinizing

follicles, 9, 21
 hormone, 9
 stromal cells, 22

Lymphocytes, 91
 Lymphocytic cervicitis. *See* Follicular cervicitis
 Lymphoepithelioma-like squamous carcinoma, 48
 Lymphoma, 179, **180**, **233**
 differential, 180
 vs follicular cervicitis, 97, 180

M

Macrocytes, 50, **51**, 89, **156**, 157, **157**, 160, **160**, 172, **172**, 215, 216
 Macrophages, 91
 hemosiderin-laden, 91, 92, **92**, 118
 lipid-laden, 118
 tingible body, 97, **97**, 180, 215
 Malakoplakia, 172, **173**
 Male factor and cervical cancer, 70, 88
 Malignant cells. *See* specific entities
 Malignant mixed müllerian tumor, 177, **178**
 Malpractice litigation, 8, 54, 64, 182, 204, 210, 211, 218, 250-260
 Management
 clinical, 196, 204
 guidelines, 200, 242
 Martian popping thing, 150
 Maturation Index, 18
 intermediate predominant, 20, **21**, **23**
 menstrual cycle, 22
 menopause, 22
 parabasal predominant, 19
 pregnancy, 22
 specimen, 18
 superficial predominant, 21
 Megace®, 162, **163**, 167
 Melanoma, 179, **179**
 Menstrual cycle, 9, 22
 Mesenchymal tumors, 175. *See also* Sarcoma
 Mesonephric adenocarcinoma, 133, **134**
 Menopause/postmenopause
 abnormal bleeding, 118
 abnormal shedding endometrial cells, 114, 116, 241
 atrophy, 16
 dysplasia, HPV infection, 66, 73
 hormonal cytology, 19, 22, 66
 maturation patterns, 16-22
 Metaplasia/metaplastic cells. *See* specific types and sites
 atypical immature, 52
 atypical squamous, 60, **60**, **63**, 217, **229**
 in endometrial cells, 115
 hydropic degeneration, 26
 IUD effects on, 70, **151**, 152, 163-164, **163**, **183**, 217
 squamous, 24, **24**, 25-27, **26**, 215, **222**
 spider cells, 26, **26**
 tubal, 115, 150, **151**, 186, **188**, 217, **231**
 urothelial (transitional cell), **20**, 48, **48**
 vacuolated, 26, **25**, 94, **94**, **147**, 152

Metaplastic dysplasia, 32-36. *See also* Dysplasia
 immature, **30**, **31**, 33, **35**, **226**
 mature, **30**, 34, **35**, **225**
 Metastases, 152, **153**, 181, **181**, **183**, 188, **188**, **233**
 clues to primary site, 181
 Michaelis-Gutmann bodies, 173, **173**
 Microglandular hyperplasia, of endocervix, 113, **113**, **151**, 152, 162, 186, **187**
 Microinvasive cervical adenocarcinoma, 143, **143**
 Microinvasive squamous cell carcinoma, 37-41
 biology, 41
 clinical features, 38
 cytology, 39, **39**, **40**
 definition, 39
 differential, 40
 histology, 38, **39**
 progression, 38, 41
 therapy, 41
 Microorganisms, 89, 98-108, 215. *See also* specific infections, Inflammatory change, and specific organisms
 Minimal dysplasia. *See also* Atypical squamous cells
 atypical squamous metaplasia, 60, **60**, **61**, **229**
 biologic significance of, 60
 squamous atypia, 59, **60**, **61**, **229**
 Mitotic figures, 31, 56
 atypical, 56
 Mixed müllerian tumors, 177, **178**
 adenosarcoma, 178
 carcinofibroma, 178
 carcinosarcoma, 177, **178**
 malignant, 177, **178**
 Mobiluncus, 101
 Monilia, 105. *See also* *Candida*
 Mucinous adenocarcinoma
 endocervical, 126
 endometrial, 124
 Mucin vacuole, 26, 104, 110, 132, 182
 Mucus
 cigarette smoke and, 88
 dysplastic cells hiding in, 34, 114
 endocervical, 90, 110, 112
 ferning, 189, **191**
 strands mimic *Candida*, 105, **105**, 215
 Mucus bodies. *See* Blue blobs
 Müllerian duct, 8, 110, 161
 Müllerian tumors, mixed, 177, **178**. *See* specific entities, Mixed müllerian tumors
 Multinucleated giant cell histiocytes, 19, 92, **92**, 118, 158, 168
 Multiple slide blinded review, 254-257
 Murayama, Hashime, 7
myc gene, 84
 Myeloid tumor, extramedullary, 180, **180**
 Myofibroblast(s), 98



N

Naked nuclei. *See also* specific entities
 atrophy, 19, 67, 116, 174, 215
 blue blobs vs, 68
 carcinoma in situ, **32**, 58
 cytolysis, 17, 22, **90**
 endocervical mucus, 112
 tamoxifen, 116, 163

Natural history of squamous lesions, 74

Navicular cells, 17, **17**, 20, **21**, 22, 50, 166, **166**, 215, **222**

Nebular body, 104

Necrosis
 caseous, 104
 coagulative, 68, 113
 dirty, 181, 182
 risk factor endometrial pathology, 118
 single cell, 113,
 tumor diathesis and, 43, 216. *See also* Tumor diathesis

Negative for Intraepithelial Lesion or Malignancy (NILM), 234, 237, 238
 with quality indicators, management, 200

Neoplasia, general features. *See also* specific entities
 carcinogenesis, 23, 75, 85
 cofactors, 86
 epidemiology of, 69
 human papillomavirus, 83
 in pregnancy, 169
 risk factors, 70
 site, 75

Neovagina, 190, **191**

Neuroendocrine carcinoma, 173, **174**, **183**, **188**
 carcinoid tumor, 174
 large cell, 175
 small cell, 173, **174**, **183**, **188**

Neurosecretory granules, 175

Neutrophils, 91, **221**

Newborn, 21, **21**

Nobel prize, 4, 7, 76

Nomenclature, 53, 54, 202

Non-Hodgkin lymphoma. *See* Lymphoma

Nonkeratinizing dysplasia, 34, 36

Nonkeratinizing squamous cell carcinoma, 44, **44**, **45**, 216, **227**. *See also*
 Squamous cell carcinoma

Nonkeratinizing squamous epithelium, 24, 27

Normal flora, 89, **90**. *See also* Bacterial vaginosis, Lactobacilli

Nuclear/cytoplasmic ratio, 13, 26, 31, 32, 34, 52, 56-58, 60, 67-68, 93, 95, 159,
 184, 216

Nuclear ghost, 28, 46, 216

Nuclear inclusion, 99, 215

Nuclear polarity, loss of, 32, 58, 138, 184, 209, 216

Nuclear streaming, 48, 95, 215

Nucleoli
 adenocarcinoma in situ, **231**, **232**
 dysplasia, carcinoma in situ, 31, 32, **41**, **185**, **221**
 inflammation, 94
 liquid-based cytology, 94, 215, **221**
 microinvasive carcinoma, 37, 39, **39**, **40**

Nucleus, 13

naked. *See* Naked nucleus
 raisinoid, 32, 34, 57, 58, 208, **208**, **209**, **226**. *See also* Brains in bottles
 size of, 13, 17, 56-58, 93, 120, 128, 141, 214

O

Oat cell carcinoma. *See* Small cell neuroendocrine carcinoma

Obscuring factors, Bethesda System, 236, 237

Oral contraceptives, 28, 117, 162
 abnormal shedding endometrial cells, 117
 Arias-Stella reaction, **153**, 166, **167**
 cockleburrs, 168, **169**
 decidual cells, 167, **167**
 Ectropion, 10, 24, 90
 folate deficiency, 89, 172
 inflammatory change, 90
 microglandular hyperplasia, 113, **113**, **151**, 152, 162, 186, **187**
 psammoma bodies, 192. *See also* Psammoma bodies
 pseudoparakeratosis, 28, **29**, 113, **114**, **151**, 152, 162, 186, **187**
 risk factor for cervical neoplasia, 70, 88, 125
 risk in endometrial carcinoma, 119

Orangeophilia, 19, **20**, 28, **29**, 36, **36**, **37**, 45, 46, **46**, **47**, **65**, 68, 94, 113, 114,
 157, 170, 215, **227**, **228**

Organisms. *See* specific agents, Infections, Inflammatory change

Ovary, 9

P

Pale bland cells, 57, 93, **208**

Papanicolaou, George, 5, xi

Papanicolaou Classification System, 54

Papillary
 cervical adenocarcinoma, 131, 133,
 IUD aggregates, **151**, 163-164, **163**, 182, **183**
 metastatic carcinoma, 181, **181**
 psammoma bodies and, **181**, 190, 192
 serous adenocarcinoma, 123, 133
 squamous cell carcinoma, 47

Pap test. *See also* Cervix and specific entities
 failure of, 204-211
 false-negative results in, 199
 history of, 2
 myths, 2
 practice standard, 211
 in pregnancy, 169
 procedure for taking, 197
 as screening procedure, 212
 sample collection, 199
 screening recommendations, 199
 sensitivity, 204
 specimen adequacy, 197
 synopsis of, 12

Paper spindle effect, 105. *See also* Shish kebab

Parabasal cells, 16, **16**, **23**

- Parabasal predominant Maturation Index, 19, 21, 23. *See also* Atrophy, Maturation Index
- Parachromatin clearing, 38, 40, 174
- Paradox of dysplasia, 34, 208, 211
- Paradoxical maturation, 38, 40
- Parakeratosis, 28, **29**, 215, **222**. *See also* Pseudoparakeratosis
atypical, **29**, 65, **65**
pseudo, 28, **29**, 113, **114**, **151**, 152, 162, 186, **187**
- Parasites, 106, 108
- Parity, 71
- Patented genotypes, 81
- Pearls, 28, **29**, 38, 45, 46, **46**, 123, 216
- Pemphigus vulgaris, 172
- Pencil
dust, 193
thin endocervical cells, 110, **111**, 161, **161**
- Penis, 70
- Perinuclear halo, **47**, **49**, 50, **51**, 62, **62**, 94, **94**, 107, 215. *See also* Halos, Koilocytes
- Persistent carcinoma, 156, 159
- Pessary, 90
- Phthirus pubis, 108, **108**
- Placental
hormones, 18, 22, 166
site trophoblastic tumor, 179
- Plant cells. *See* Artifacts
- Plasma cells, 91, **91**
- Plasmacytoma, 180
- Pleomorphic dysplasia, 37. *See also* Keratinizing dysplasia
- Pleomorphic parakeratosis, 28, 65. *See also* Atypical parakeratosis
- Polka dot cells, 50, **51**
- Pollywog cells in urothelial carcinoma, 182, **183**
- Polychromasia, 50, **51**, 94
- Polymerase chain reaction (PCR), 81
- Polyp
endocervical, 110, 112, 148, **149**
endometrial, 114, 117, 118
- Polyploidy, 52, 147, 148, 167, 186, 190, 216
- Posthysterectomy
benign gland cells, 188, **189**
Pap test, 198
- Postmenopausal/postmenopause
abnormal bleeding, 118
abnormal shedding endometrial cells, 114, 116, 241
atrophy, 16. *See also* Atrophy, Maturation Index
dysplasia, HPV infection, 66, 73
hormonal cytology, 19, 22, 66
maturation patterns, 16-22
- Postpartum
atrophy, 19, 22, 166. *See also* Atrophy, Maturation Index
atypia, 152, **153**, 166, 169, **170**
abnormal shedding endometrium, 117
dysplasia, 87, 169
histiocytes, 91, 92
squamous metaplasia, 24
- Postradiation dysplasia, 160
- Practice standard, 211, 250
- Pregnancy
Arias-Stella reaction, 166, **167**
cells of, 166, **166**, 215
cervical neoplasia in, 169
cockleburrs, 168, **169**
cofactor, cervical cancer, 71, 86, 87
decidual cells, 167, **167**
ectropion, 10, 24
hormonal cytology, 22, 166
Pap test in, 166, 169, 200
postpartum atypia, 169, **170**
prevalence of cervical cancer, 72, 169
puerperal endometritis, 170
trophoblasts, 168, **168**, **169**
vitamin deficiency, 172
- Prevention of cancer
diet and, 88
primary, 2, 220
- Primitive neuroectodermal tumor (PNET), 177
- Protozoa, 106-108
- Psammoma bodies, **181**, 190-192, **192**
IUD and, 163
metastases and, 181, **181**
- Pseudoactinomycotic radiate array, 168, **169**. *See also* Cockleburrs
- Pseudodiathesis, 121, **221**
- Pseudohermaphroditism, 23
- Pseudohyphae, 105, 215
- Pseudokeratosis, **20**, 28, 68, **68**, 94, **94**, 107, **222**
- Pseudomaturation, 107, 118, 166
- Pseudoparakeratosis, 28, **29**, 113, **114**, **151**, 152, 162, 186, **187**
- Pseudo-pseudoparakeratosis, **20**, 28, **68**
- Pseudostratified, 121, 137, 138
- Publications, cytology
Acta Cytologica, 7
Atlas of Exfoliative Cytology, 7
Cytologic Diagnosis of Cancer, 7
- Puerperal endometritis, 170
- Pusballs, 91, 107, **107**
- ## Q
- Q-Probe study, 72, 209
- Quota, screening, 8
- Quality, 8, 207, 211, 234
indicators, 236
- Question
clinical, 196
re dysplasia, 13



R

Radiation

- bizarre cells, 157, **157**, **225**
 - carcinoma, persistent vs recurrent, 159
 - change, 156-158, **156**, 215, **225**
 - dysplasia, postradiation, 160
 - effect, 156-158, **156**, **157**, 215, **225**
 - glandular cells, 158, **158**
 - granulomas, 97, **98**
 - histology, 156
 - macrocytes, 50, **51**, **156**, **225**. *See also* Macrocytes
 - polychromasia, 51, 157, **157**
 - repair, 158, **158**
 - sensitivity test, 156
 - squamous cells, **156**, 157, **157**, **225**
 - stromal cells, 158, **159**
 - vacuoles, **156**, 157
- Raisinoid nucleus, 32, 34, 57, 58, 208, **208**, **209**, **226**. *See also* Brains in bottles
- Rapidly progressing cancers, 75, 82
- Reactive change, 26, 62, 94, 112, 140, 142, 215
Bethesda System, 236, 240
- Reactive endocervical cells, 112, **112**, **113**, **129**, 140, 144, 147, **147**
- Rectovaginal fistula, 190, **191**
- Rectum. *See* Colorectal
- Recurrent carcinoma, of cervix, 159-160
- Reference images. *See* **Endpapers**
- Repair/Regeneration, 95-97, **96**, 215, **224**
atypical, 66, **66**
vs cancer 95, 96
endocervical, 148, **149**
radiation, 158, **158**
- Rescreening, 205, 210
- Reserve cells(s), 10, 24, 74, 76, 82, 83, 85, 125, 134, 135, 137, 143, 184
- Reserve cell hyperplasia, 25, **25**
atypical, 33
- Rhabdoid tumor, 177
- Rhabdomyosarcoma, 177
- Risk
factors for cervical cancer, 70
levels, defined, 199
management, 250-253
- rosebud
- Rosetta stone, 13
- Rosette, 32, 41, 126, **127**, 130, 137, **137**, 138, 144, 145, 146, **146**, 150, 152, 184, 188, 190, 216, 217

S

- Sampling devices, 198
- Sarcoidosis, 98
- Sarcoma, 175-177
alveolar soft part sarcoma, 177
carcinosarcoma, 177, **178**. *See also* Malignant mixed müllerian tumor
granulocytic, 180, **180**
- leiomyosarcoma, 175, 176, **176**
- primitive neuroectodermal tumor, 177
- rhabdoid tumor, 177
- rhabdomyosarcoma, 177
- stromal sarcoma, 176, **177**, **233**
- “Satisfactory” but “limited” specimen, 234, 236
- SCC. *See* Squamous cell carcinoma
- Schiller test, 4, 197
- Schistosomes, 108, **108**
- Screening, 198
cellularity and, 238
- Screener fatigue, 210
- Secretory
carcinoma, 124, **125**
cells, 110, 150
phase menstrual cycle, 22, 114
vacuoles, 92, 140
- Seminal vesicle cells, 190, **191**, 199
- Sensitivity of Pap test, 2, 12, 59, 198, 204, 211
adenocarcinoma, 126
adenocarcinoma in situ, 136
atypical glandular cells and, 145
atypical squamous cells and, 61, 64
HPV-Pap test, 219
liquid-based cytology, 218
- Serous carcinoma, 123, **123**
- Sexual activity
age at first coitus, 70, 71, 72
cervical cancer and, 70
number of partners, 70, 71, 72, 78, 86, 125, 199, 220
and risk factor, 70
- Sexual practices, 2, 220
- Sexual revolution, 7, 71, 72
- Shakespeare, 156, 196
- Shift in vaginal flora, 101, **101**, 215, **223**
- Shish kebab, 105, **105**, 215, **222**
- Signet ring cell carcinoma, 132
metastatic, 182, **183**, **233**
- SIL. *See* Squamous intraepithelial lesions
- Small blue cells, 174
- Single bullet theory, 75
- Small cell carcinoma in situ, 33, **33**
- Small cell neuroendocrine carcinoma, 173, **174**, **183**, **188**
HPV and, 174
- Small cell squamous carcinoma, 42, 44, **44**, 216, **228**
- Smoking
bacterial vaginosis, 100
cervical neoplasia and, 71, 77, 88, 220
early menopause, 19
- Societies, cytology
American Cancer Society, 7
American Society of Cytology, 7
Intersociety Cytology Council, 7
- Southern blot, for human papilloma virus detection, 80

- Specimen
adequacy of, 234
cellularity, 236
endocervical cells and, 197
quality indicators, 234
unsatisfactory, 236
quality indicators, 234
type, 234
- Sperm, spermatozoa, 190, **191**
- Spermicide, 71
- Spider cells, 26, **26**
- Spiegelosis, 27, 28, **29**, 196
- Spinnbarkeit, 189
- Spindle squamous cell carcinoma, 48, **48**
- Splendore-Hoeppli phenomenon, 102, **103**, 169
- SpongeBob phenomenon
- Squamocolumnar junction, 10, **24**, **111**
- Squamous atypia, 59, **60**, **61**, **228**, **229**. *See also* Atypical squamous cells
- Squamous carcinoma in situ. *See* Carcinoma in situ
- Squamous cell carcinoma (SCC), 41-48, 152, **153**, 216, **227**, **228**
age distribution, 72
bland cells, **208**
clinical features, 42
condylomatous, 47, 47
cytology of, 42, **43**, **44**, **45**, **227**, **228**
diathesis, 38, 42, **43**, 46, 216, 227, **228**. *See also* Tumor diathesis
differential, 46, **153**
histology, 42, **44**, **45**
keratinizing, 45, **45**, **46**, **47**, 216, **228**
lymphoepithelioma-like, 48
microinvasive, 37-41, **39**, **40**
nonkeratinizing, 44, **44**, **45**, **153**, 216, **227**
papillary, 47
prognostic factors, 42
small cell, 44, **44**, 216, **228**
spindle cell, 48, **48**
transitional cell (urothelial), 47
variants, 42, 47
verrucous, 47, **47**
wart, 47, **47**
- Squamous cells. *See* specific entities
- Squamous cellularity. *See* Cellularity
- Squamous differentiation, 14
- Squamous intraepithelial lesion (SIL). *See also* Dysplasia, Carcinoma in situ
high grade (H SIL), 13, **31**, **32**, **33**, **35**, **36**, **37**, **40**, **51**, 54, 76, 85, **208**,
209, 216, **226**, **227**, 239
bland cell, **208**
involving glands, glandular extension, 32, 40, **153**, 184
management, 201, 242
with features suspicious for invasion, 37, 40, 240
incidence/prevalence, 77
low-grade (L SIL), 13, **30**, **35**, **36**, **41**, 49, **49**, **51**, 52, 54, 85, 201, 216,
225, **226**, 239
management, 201
natural history of, 74
site of, 75
terminology of, 53
- Squamous metaplasia, 10, 24, **24**, **26**, 215, **222**
atypical, 60, **60**, **63**, 216, **229**
differential
vs atrophy, 26
vs dysplasia, 34
immature, 25, **27**
inflamed/degenerate, 34, **35**, 65
mature, 27, **27**
spider cells, 26, **26**
- Sticky histiocytes, 92, 116, **116**, 117, 130
- Stratum corneum, 27, **29**
- Stratum granulosum, 27, **29**
- Stromal cells
endometrial, 116, **116**, **117**, **149**, 217
ovarian, 9, 19, 20, 21, 22
radiated, 158, **159**
- Stromal sarcoma, 176, **176**, **233**
- Sulfur granules, 102
- Superficial cells, **16**, 17, **17**, **221**
- Superficial predominant Maturation Index, 21. *See also* Maturation Index
- SurePath®, 115, 214, 217, 236
- Suture granuloma, 92, 98, **98**, 105
- Syncytial aggregates. *See* Hyperchromatic crowded groups
- Syncytiotrophoblast, 168, **168**, **169**, 178
- Syndrome
androgen insensitivity, 23
bacterial vaginosis, 119
carcinoid, 173
Down, 23
hydrops tubae profluens, 188
inappropriate antidiuretic hormone, 173
Peutz-Jegher, 131
testicular feminization, 23
toxic shock, 19
Turner, 19
- Syphilis, 105
- ## T
- Tadpole cells, 46, 67, 157, 182, 216
- Tamoxifen, 22, 116, 119, 162, 189
- Tetracycline, 74
- Thermal artifact, 100, 161, **161**
- Thin CIN, 56
- ThinPrep®, 214, 215, 218, 219, 238, 253
- Third type cells, 13, 34
- Tingible body macrophages, 97, **97**, 180, 215, **223**
- Tobacco use. *See* Cigarette smoking
- Torulopsis*, 105
- Transformation (transition) zone, 4, 10, 24, 75
- Transit times, 75

Transitional (urothelial) cells, 190, **191**
 Transitional cell (urothelial) carcinoma, 47, 182, **183**
 Transitional cell (urothelial) metaplasia, **20**, 48, **48**
 Transition (transformation) zone, 4, 10, 24, 75
 Trauma
 cervical neoplasia and, 74, 87
 HPV infection, 83
 Trich halos, 50, **51**, 94. *See also* Halos
Trichomonas vaginalis, 106, **107**, 215, **223**
 cannonballs, 91, 107, **107**
 and cervical neoplasia, 106
 and cytologic atypia, 61, **61**, 93, 94, 107
 halo, 50, **51**, 94
 leptothrix and, 102, 107, **107**
Trichuris trichiura, 108
 Trifecta, 52
 Trophoblastic cells, 168, **168**, 178
 cytotrophoblast, 168, **168**, 178
 syncytiotrophoblast, 168, **168**, **169**, 178
 Trophoblastic disease, 178
 Trophoblastic tumor, 179
 Tubal metaplasia, 115, 150, **151**, 186, **187**, 188, 217, **231**
 Tuberculosis, 104
 Tumor diathesis, **38**, 40, 42, **43**, 46, 128, **129**, 216, 227, **228**
 differential, 43
 Two-tone cells, 50, **51**, 94, 157. *See also* Polychromasia

U

Ulcer, 16, 92, 95, 98,
 Umbrella cells. *See* Urothelial cells
 Urothelial (transitional) cells, 190, **191**
 Urothelial (transitional cell) carcinoma, 47, 182, **183**
 Urothelial (transitional cell) metaplasia, 48, **48**
 Uterine bleeding, dysfunctional, 117
 Uterine cervix. *See* Cervix
 Uterus, 10. *See also* specific entities
 prolapse, 27

V

Vacuolated metaplastic cells, 26, **26**, 94, **94**, **147**, 152
 Vagina, 10. *See also* specific entities
 Vaginal adenosis, 8, 24, 110, 161, 163, 189

Vaginal discharge, 90
 Vaginal pH, 89
 Vaginal pool sample, 117, 207
 Vaginitis, 90. *See also* Atrophy with inflammation, specific infections
 allergic, 91
 causes of, 90
 Vaginosis, bacterial, 100
 Venereal disease. *See also* specific entities
 risk factor for cervical cancer, 88
 Verrucous squamous cell carcinoma, 47, **47**
 Vesicovaginal fistula, 190, **191**
 Villoglandular adenocarcinoma, **130**, 131, **131**, 133, **183**
 Virus, 98-100. *See also* specific types
 Vitamin
 cofactor in cervical neoplasia, 88
 deficiency, 172
 macrocytes, 50, 170, **172**
 in pregnancy, 170
 Vulva, 10

W

Warty squamous cell carcinoma, 47, **47**
 Wastebasket category, 59, 61, 63, 240
 Wegener granulomatosis, 98
 Wreaths, endometrial, 114, **114**, **230**

X

X chromosome, 23

Y

Yeast, 105
 Young women, and cervical carcinoma, 73

Z

Zone, transformation, transitional, 4, 10, 24, 34, 75, 76, 83, 85, 125, 136, 197,
 219, 237