Results were obtained by the technique of labeled mitoses ([27] in Part I). Since the duration of mitosis is usually not accurately known, the intermitotic period is divided into three phases: G_1, the period from metaphase to the start of DNA synthesis; S, the period of DNA synthesis; and G_2, the period from the end of DNA synthesis to metaphase. Values for the S and G_2 phases are usually more precise than for the G_1 phase and the whole intermitotic period.

Part I. Normal Tissues

	Tissue	Animal	Intermitotic Period, hr				Reference
			In G_1 Phase	In S Phase	In G_2 Phase	Total	
	Embryo						
1	Neural tube	Mouse	3	4.0	1.5	8.5	16
2	Primitive ependymal cells	Mouse	4	5.5	1.5	11	1
3	Mesenchymal cells	Mouse	13	5.5	1.5	20	1
4	Primitive erythroblasts	Mouse	.....	11	1.5	.....	1
5	Corneal epithelium	Mouse	.....	8	5	100	10
	Digestive epithelium						
6	Cheek pouch	Hamster	120	8.6	2.4	130	3
7	Esophagus	Mouse	.....	2	8	30	13
8	Forestomach	Mouse	15	13.5	2	30	34
9	Stomach	Man	.....	18	3	.....	33
10	Duodenum	Mouse	3 1/	7-11 1/	1.3	10.5-13	18
11	Jejunum	Hamster	6	8	2	16	21
12		Rat 2/	2.5	6.5	1.5	10.5	4
13	Ileum	Man	.....	11	4	.....	20
14	Colon	Man	.....	13	2	60	23
15		Mouse	16	7	1	24	22

1/ Length of period increases with age. 2/ Some cells at bases of crypts proliferate more slowly.

continued

Part I. Normal Tissues

	Tissue	Animal	Intermitotic Period, hr				Reference
			In G_1 Phase	In S Phase	In G_2 Phase	Total	
16	Liver, parenchymal cells	Mouse	.....	8	4	.....	11
17		Rat	9[1]	9[1]	3.5	21.5	26
18	Tracheobronchial epithelium	Rat	.....	7	3.5	.....	32
	Bone marrow						
19	All cell types	Mouse	2	4.5	2	8.5	12
20	Erythroblasts	Dog	2.5	6	1.5	10	17
21			2.5	8	1.5	12	25
22		Rat, 6 wk old	2	4.9-5	2	9	28
23		11-13 wk old	1.5	7.5	1.5	10.5	15
24	Erythroblasts & myeloblasts	Man	.....	12	...	.....	30
	Urogenital system						
25	Bladder epithelium[3]	Mouse	10	6	3	19	19
26	Testis: spermatogonia[4]	Mouse	7.5-10.5	7.5-18	3-8	26-31	24
27	Uterine epithelium	Mouse	32	8	2	42	9
28	Vaginal epithelium	Mouse	.....	7.5	2	.....	31
29	Mammary gland alveoli	Mouse	.....	9-28[5]	2	.....	2
	Bone						
30	Cartilage cells	Rat, newborn	6.8	11.6	4.6	22	7
31	Osteoprogenitor cells	Rat, 6 da old	14	8	2	24	35
	Integumentary system						
32	Epidermis, basal cells	Mouse, hairless	.....	7	1	30	6
33	Ear	Mouse	.....	30	7	.....	29
34	Hair follicle	Mouse	3	7	2	12	5
35			4.5	6	2	12.5	14
36		Sheep	9.4	9.5	1.6	21	8

[1] Length of period increases with age. [3] Independent of ploidy. [4] Variation with cell type. [5] Length of phase dependent on hormonal status.

Contributor: Steel, G. Gordon

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continued

Part II. Neoplastic Tissues

	Tumor	Type	Animal	Volume Doubling Time, hr	Intermitotic Period, hr				Reference
					In G_1 Phase	In S Phase	In G_2 Phase	Total	
1	Adenocarcinoma	Spontaneous	Mouse	204	22	10	3	35	6
2		Induced	Rat	430	14	9	1	24	10
3	Adenosarcoma BICR/M1	Transplanted	Rat	23	7.5	7.5	2.7	18	11
4	Carcinoma (cheek pouch)[1]	Induced	Hamster	110	2.4	6.0	2.0	10	7
5	Ehrlich ascites tumor[2]	Transplanted	Mouse	40	0.2	13	3	16	5
6	Epithelioma	Spontaneous	Man	....	21	12	5	38	3
7	Fibrosarcoma NCTC 2472	Transplanted	Mouse	38	4.9	10.4	1.7	17	2
8	RIB5	Transplanted	Rat	24	4.0	8.0	1.6	13	1
9	Leukemia	Spontaneous	Man	....	36	26	4	66	8
10	Melanoma	Spontaneous	Man	....	37	21	5	63	9
11	Rhabdomyosarcoma	Transplanted	Rat	54	6.2	9.7	2.7	19	4
12	Sarcoma 180	Transplanted	Mouse	29	2.6	8.7	2.5	14	10

[1] Some strain dependence. [2] Increase with tumor age.

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