



# **ACMP Task Group**

## **SURVEY OF PHYSICS RESOURCES FOR RADIATION ONCOLOGY SPECIAL PROCEDURES**

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# Survey sections

- **Patient Load Estimate**
- **Medical Physics Equipment and Operations Costs**
- **Medical Physicists and Dosimetrists/Technologists Efforts**
  - **Commissioning Effort**
  - **Ongoing Effort**

# Annual Workload of Institutions Surveyed

	Mean	Std. Dev	Min.	Max.
HDR Patients	58	6	9	300
External Beam Patients	912	128	0	7105

5					
6	<b>Commissioning Costs</b>				
7	Radiotherapy Equipment Costs	\$446,832	\$21,549	0	795,000
8	Physics Equipment Costs	\$21,783	\$3,034	0	134,024
9	Physics Operation Costs	\$513	\$225	0	12,000
10	Med Phys Effort (hrs) - Commissioning (D)	331	52	0	3,000
11	Dos/Tech Effort (hrs) - Commissioning (E)	44	9	0	350
12	Cost of Commissioning Effort	\$26,119	4,014	0	235,500
13	Total Physics Startup Cost	\$48,415	5,329	1,200	235,500
14	Total Physics Startup Cost/Patient	\$173	22	1	1,402
15					
16	<b>QA Effort</b>				
17	Annual Review(hrs/yr) - Med Phys (F)	37	4	4	228
18	Annual Review (hrs/yr) - Dos/Tech (G)	5	2	0	100
19	Weekly (hrs/wk) - Med Phys (H)	2	0	0	10
20	Weekly (hrs/wk) - Dos/Tech (I)	1	0	0	5
21	Total Amount QA (hrs/yr) - Med Phys	124	13	8	640
22	Total Amount QA (hrs/yr) - Dos/Tech	53	9	0	360

24	<b>Dosimetry Effort</b>				
25	Med Phys Effort (hrs/pat), Treatment Planning (a)	1	0	0	12
26	Dos/Tech Effort (hrs/pat), Treatment Planning (M)	1	0	0	8
27	Average Number of Fractions per Course (b)	4	0	0	16
28	Med Phys Time (hrs/fraction) (c)	1	0	0	7
29	Total Med Phys Treatment Time (bxc=d)	4	0	0	28
30	Total Med Phys Treatment Time (hrs/pat)(a+d=L)	5	1	0	30
31	Aver Num In-Vivo points/patient (e)	0	0	0	12
32	Med Phys In -Vivo Time per point(hrs/point) (f)	0	0	0	1
33	Dos/Tech In-Vivo Time per point (hrs/point) (g)	0	0	0	1
34	Med Phys In-Vivo Time per Patient (hrs/ patient) (N)	0	0	0	4
35	Dos/Tech In-Vivo Time per Patient (hours/pt) (O)	0	0	0	1
36	Med Phys Dosimetry Effort per Patient (hrs/pat)	5	1	0	31
37	Dos/Tech Dosimetry Effort per Patient (hrs/pat)	1	0	0	8
38		0	0	0	0
39	<b>Consultation, Coverage</b>	0	0	0	0
40	Med Phys Treat Preparation Effort (hrs/pat) (J)	1	0	0	7
41	Dos/Tech Treat Preparation Effort(hrs/pat) (K)	1	0	0	7
42	Med Phys Special Consult Coverage Effort (hrs/pt) (P)	1	0	0	20
43	Med Phys Coverage Effort (hrs/pat)	2	0	0	22
44	Dos/Tech Coverage Effort (hrs/pat)	1	0	0	7

45		0	0	0	0
46	<b>Other</b>	0	0	0	0
47	Additional Med Phys Effort per Patient (hrs) (Q)	1	0	0	5
48	Additional Dos/Tech Effort per Patient (hrs) (R)	0	0	0	5
49		0	0	0	0
<b>50</b>	<b>Total Ongoing Effort per Patient</b>	0	0	0	0
51	Ongoing Med Phys Effort (hrs/pat)	11	1	1	51
52	Ongoing Dos/Tech Effort (hrs/pat)	3	0	0	21
53	Total Cost of Ongoing Effort per Patient	\$896	80	83	4,208
54		\$0	0	0	0
55	<b>Total Effort and Cost Analysis</b>	\$0	0	0	0
56	Total Med Phys Effort(hrs/pt)	\$12	1	1	69
57	Total Dos/Tech Effort(hrs/pt)	\$3	0	0	21
58	Total Effort Cost per Patient	\$996	94	83	5,609
59	Total Physics Cost per Patient	\$1,069	95	83	5,609
60	Total Physics Cost per Year	\$50,626	5,299	4,596	261,646

