

BrachyNext



Working Together to Shape the Future of
Brachytherapy

BrachyNext

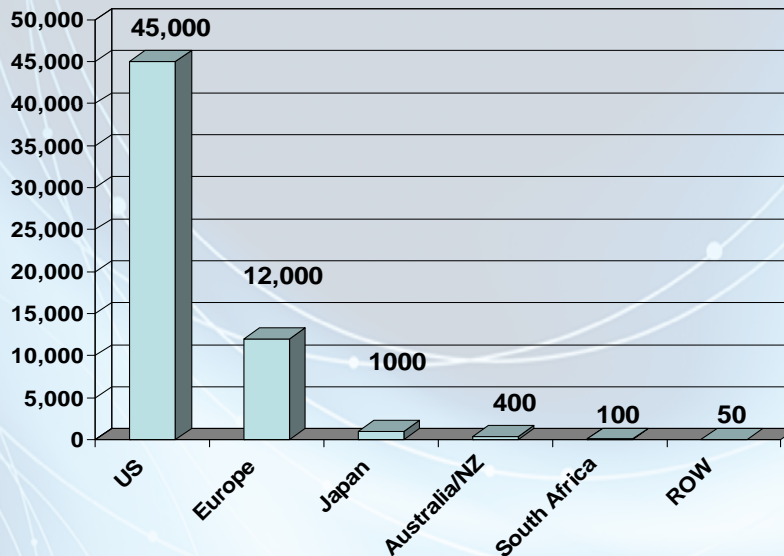


Working Together to Shape the Future of
Brachytherapy

Starting a Brachytherapy Program in the United States

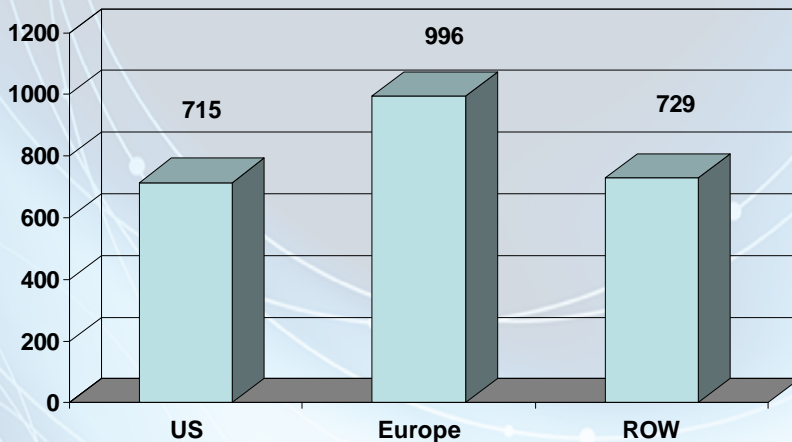
Tim R. Williams, MD
Medical Director – Radiation Oncology
The Lynn Cancer Institute
Boca Raton Regional Hospital

LDR Brachytherapy Cases Worldwide

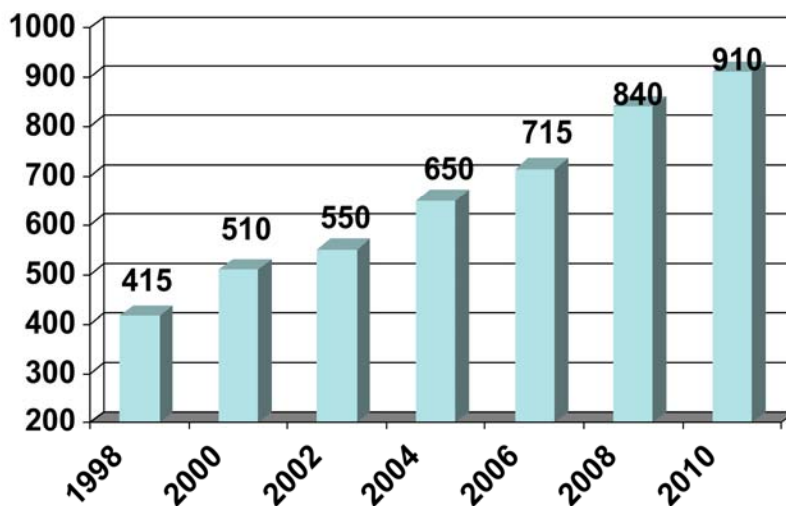




HDR Units Worldwide



HDR Units: US Installed Base

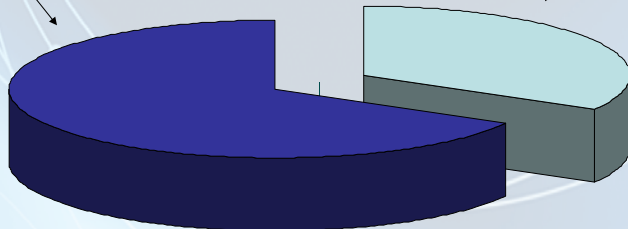




HDR Units: US Number of Programs

No HDR Program: 66%

HDR Program: 34%



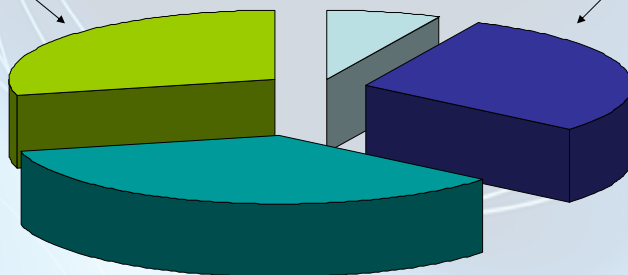
Total Radiation Oncology Sites: 2,110

HDR Units: US by Facility Size

200-399 Beds: 29%

< 200 Beds: 7%

Non-Hospital: 29%

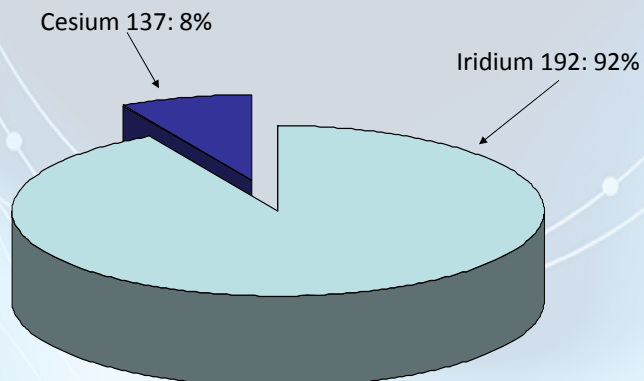


> 400 Beds: 35%

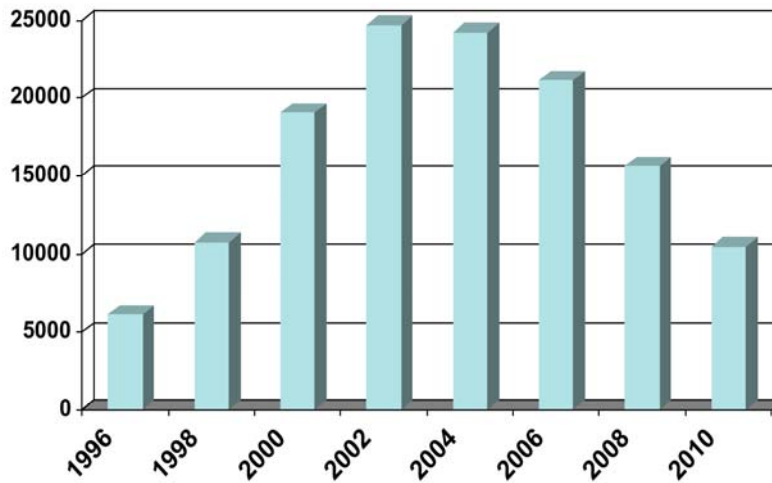
715 Units in 710 Sites



HDR Units: US by Isotope

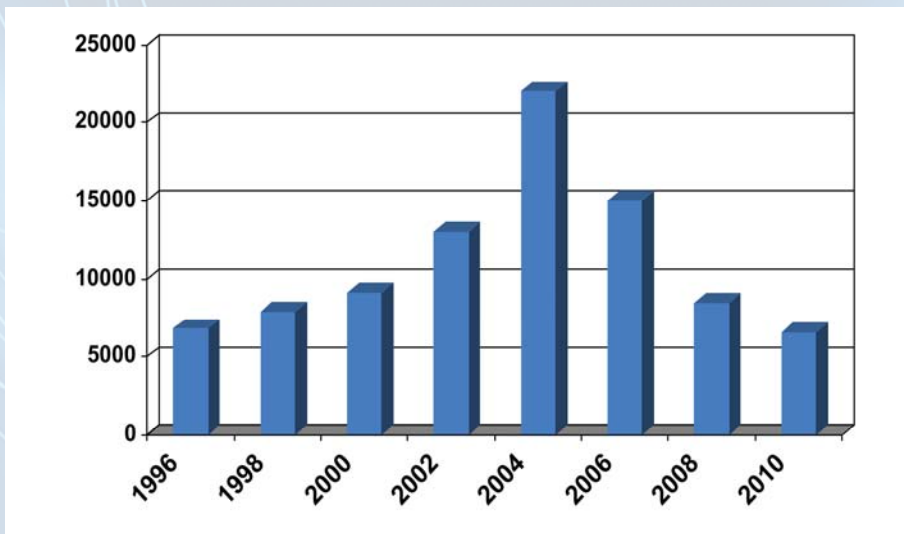


Medicare Claims CPT® 7778 1996-2010

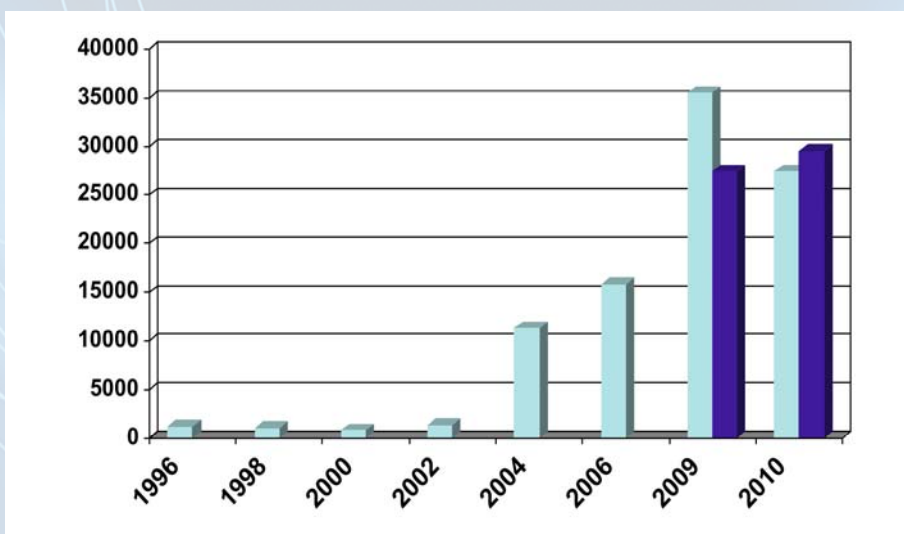




Medicare Claims CPT® 77784/77787 1996-2010

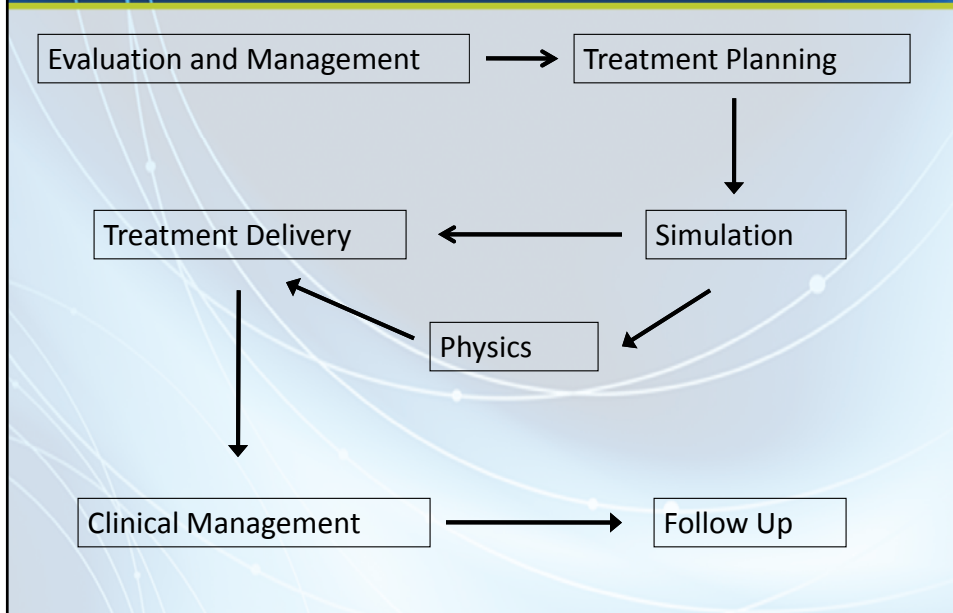


Medicare Claims CPT® 77781/77785-6 1996-2010





The Radiation Oncology Process of Care



IMRT Breast Patient 2011 APC Reimbursement

Procedure	CPT	Quantity	APC
Established Patient Level IV	99214	1	\$99.71
Simulation Complex	77290	1	\$271.61
Complex Device	77334	1	\$199.71
IMRT MLC Shaper	77338	1	\$926.74
Dosimetry Calculation	77300	4	\$417.92
IMRT Plan	77301	1	\$926.74
Continuing Physics	77336	7	\$731.36
IMRT Delivery	77418	28	\$12,270.16
Special Electron Plan	77321	1	\$271.61
Complex Daily Treatment	77414	5	\$802.70
Total			\$16,918.26



Mammosite Breast Patient 2011 APC Reimbursement			
Procedure	CPT	Quantity	APC
Established Patient Level IV	99214	1	\$99.71
Re-established Patient Level I	99211	1	\$52.36
Intermediate Simulation	77285	1	\$271.61
Complex Simulation	77290	1	\$271.61
CT Simulation	77290	1	\$271.61
3D Conformal Simulation	77295	1	\$926.74
Simple Simulation	77280	10	\$1,044.80
Dosimetry Calculation	77300	10	\$1,044.80
HDR Remote Aferloading	77855-7	10	\$7,001.00
Continuing Physics	77336	2	\$208.96
Iridium 192 Source	C1717	10	\$2,313.80
Totals			\$13,354.93

Reimbursement for HDR Partial Breast (MLB or Savi)				
Procedure	CPT	Quantity	APC	APC Total
Partial Breast HDR(MLB or Savi)				
Return Visit Established Patient Level 4	99214	1	\$96.16	\$96.16
Re-established patient visit Level 1	99211	1	\$56.77	\$56.77
Intermediate Simulation(Scoping CT)	77285	1	\$311.37	\$311.37
Simulation Complex/CT Tx Planning	77290	1	\$311.37	\$311.37
Simulation 3-D Conformal planning	77295	1	\$1,036.39	\$1,036.39
Simple Simulation	77280	10	\$114.65	\$1,146.50
Radiation Dose Calc	77300	10	\$114.65	\$1,146.50
Brachy AfterLoad (all Channels)	77785-77787	10	\$733.80	\$7,338.00
Special Treatment Procedure	77470	1	\$413.22	\$413.22
Iridium 192	C1717	10	\$249.07	\$2,490.70
Totals				\$14,346.98



Accubost Breast Patient 2011 APC Reimbursement

Procedure	CPT	Quantity	APC
Simulation Complex	77290	1	\$271.61
Simulation Intermediate	77285	8	\$2,172.88
Dosimetry Calculation	77300	16	\$1,671.68
HDR Treatment 2-12 Channels	77786	8	\$5,600.80
Iridium 192	C-1717	8	\$1,851.04
Special Treatment Procedure	77470	1	\$388.58
Complex Device	77334	2	\$399.42
Total			\$11,956.59

Liepzig Skin Cancer Patient 2011 APC Reimbursement

Procedure	CPT	Quantity	APC
Established Patient Level IV	99214	1	\$99.71
Simulation Simple	77280	2	\$104.48
Brachytherapy Plan Simple	77326	1	\$104.48
Dosimetry Calculation	77300	6	\$626.88
HDR Single Channel	77785	6	\$4200.60
Ir 192 Source	C1717	6	\$1,388.28
Simple Treatment Device	77332	1	\$199.71
Special Treatment Procedure	77370	1	\$388.58
Total			\$7,013.01



Reimbursement for HDR Leipzig Skin

HDR Leipzig Skin

Procedure	CPT	Quantity	APC	APC Total
Return Visit Established Patient Level 4	99214	1	\$96.16	\$96.16
Simple Simulation	77280	2	\$114.65	\$229.30
BrachyPlan Simple	77326	1	\$114.65	\$114.65
Radiation Dose Calculation	77300	6	\$114.65	\$687.90
HDR 1 Channels	77785	6	\$733.80	\$4,402.80
Iridium 192 (x per area treated)	C1717	6	\$249.07	\$1,494.42
Simple Block Device (Day 1 Only)	77332	1	\$213.49	\$213.49
Special Treatment Procedure	77470	1	\$413.22	\$413.22
Totals				\$7,651.94

Reimbursement for HDR Frieberg Flap

HDR Frieberg Flap

Procedure	CPT	Quantity	APC	APC Total
Return Visit Established Patient Level 4	99214	1	\$96.16	\$96.16
Complex Simulation	77290	1	\$311.37	\$311.37
Complex Block Device (Mask)	77334	1	\$213.49	\$213.49
Simulation Complex/CT Tx Planning	77290	1	\$311.37	\$311.37
BrachyPlan Complex	77328	1	\$311.37	\$311.37
Simple Simulation	77280	1	\$114.65	\$114.65
Radiation Dose Calculation	77300	10	\$114.65	\$1,146.50
Remote AfterLoad (2-12 Channels)	77787	10	\$733.80	\$7,338.00
Special Treatment Procedure	77470	1	\$413.22	\$413.22
Special Physics Consult	77370	1	\$114.65	\$114.65
Iridium 192	C1717	10	\$249.07	\$2,490.70
Totals				\$12,861.48



Reimbursement for HDR Breast Accuboot

Breast Boost -(Accuboot)

Procedure	CPT	Quantity	APC	APC Total
Intermediate Simulation	77285	5	\$311.37	\$1,556.85
Brachy Afterload 2-12 Channels	77786	5	\$733.80	\$3,669.00
Iridium 192	C1717	5	\$249.07	\$1,245.50
Block/Device Complex	77334	2	\$213.49	\$426.98
Dosimetry Calculation	77300	10	\$114.65	\$1,146.50
Totals				\$8,044.83

Reimbursement for HDR Prostate

PROSTATE HDR

Procedure	CPT	Quantity	APC	APC Total
Return Visit Established Patient Level 4	99214	1	\$96.16	\$96.16
Simulation Complex w/ct loc	77290	2	\$311.37	\$622.74
Brachy Plan-CPLX	77328	1	\$311.37	\$311.37
U.S. Guided Inter Imp	76965	1	Bundled	\$0.00
Ultrasound RAD Fields	76950	1	Bundled	\$0.00
Block Device Simple	77332	1	\$213.49	\$213.49
Special Physics Consult	77370	1	\$114.65	\$114.65
Special Treatment Procedure	77470	1	\$413.22	\$413.22
Dosimetry Calculation	77300	2	\$114.65	\$229.30
HDR>12 Sources (day one)	77787	1	\$733.80	\$733.80
HDR>12 Sources (day two)	77787	1	\$733.80	\$733.80
BrachyTherapy IR-192	C1717	2	\$249.07	\$498.14
Totals				\$3,966.67



Reimbursement for HDR GYN MUPIT

MUPIT HDR (GYN)				
Procedure	CPT	Quantity	APC	APC Total
Return Visit Established Patient Level 4	99214	1	\$96.16	\$96.16
Brachy Complex Isodose Plan	77328	1	\$311.37	\$311.37
Tmt Device Simple	77332	1	\$213.49	\$213.49
Basic Dose Calc	77300	2	\$114.65	\$229.30
HDR >12 Channels	77786	2	\$733.80	\$1,467.60
HDR >12 Channels(59)	77786	1	\$733.80	\$733.80
Simulation Complex w/ CT Scan(59)	77290	1	\$311.37	\$311.37
Simulation Complex w/ CT Scan	77290	2	\$311.37	\$622.74
Special Treatment Procedure	77470	1	\$413.22	\$413.22
BrachyTherapy IR-192	C1717	3	\$249.07	\$747.21
Special Physics Consult	77370	1	\$114.65	\$114.65
Totals				\$5,146.26

Reimbursement for HDR GYN Cylinder/Ovoids

HDR Cylinder or Ovoids (per fraction)				
Procedure	CPT	Quantity	APC	APC Total
Return Visit Established Patient Level 4	99214	1	\$96.16	\$96.16
Brachy Complex Isodose Plan (once)	77328	1	\$311.37	\$311.37
Basic Dose Calculation	77300	1	\$114.65	\$114.65
Tmt Device Simple: Cylinder/Ovoid	77332	1	\$213.49	\$213.49
HDR AfterLoader All Channels	77785-87	1	\$733.80	\$733.80
Insertion Vaginal BrachyTX Device	57156	1	\$189.43	\$189.43
Simulation Complex	77290	1	\$311.37	\$311.37
Special Treatment Procedure	77470	1	\$413.22	\$413.22
BrachyTherapy IR-192	C1717	1	\$249.07	\$249.07
Totals				\$2,632.56
*** If T&O in the O.R.	57155	1	\$1,375.20	



Proforma for HDR Brachy Therapy Suite

Items that should be Included in Proforma

1. Item Description: *Description of Function*
2. Available Manufacturers: *Alternatives for the item*
3. Priority and Timing: *In relation to other requests*
4. Is there an Item that will be replaced
5. Reason for the replacement
6. Site Preparation Requirements and Costs: *Building Modifications, IT needs*
7. Rationale for Acquisition: *Quality of Care, Patient Satisfaction, Strategic Benefit*
8. Operating Efficiencies: *Explain Efficiencies that will be gained*
9. Financial Considerations: *Provide Supporting Documentation*

Proforma for HDR BrachyTherapy Suite

Calculation Of Payback Period

1. Incremental Net Revenue
2. Labor Costs: *FTE's Needed*
3. Supply Costs
4. Maintenance /Service Contract Costs
5. Annual Contribution Margin
6. Cost of Equipment
7. PayBack Period
(Cost/Annual Contribution Margin)



Proforma for HDR BrachyTherapy Suite

Estimated Staffing Costs

1. Radiation Therapist (1.0 FT)= \$56,000
2. Registered Nurse (.5 FTE)= \$35,00
3. Front Office/Billing Person(1.0 FTE)= \$31,000
4. Physicist (.5 FTE)= \$100,000
5. Dosimetrist (.5 FTE) = \$40,000

** these estimates are without employee benefits

Proforma for HDR BrachyTherapy Suite

Estimated Equipment Costs

1. High Dose Brachy Therapy Unit = \$200,000
2. Source Exchange (4x a year)= \$24,000
3. Service Contract for HDR Unit = \$100,000 (PMI -5 year contract)
4. Ancillary Equipment (Catheters, Applicators)= \$70,000 *need replacement on a regular basis
5. QA Film= \$1200 (annual cost)
6. Radioactive Materials Lisence = \$1900 (annual cost)
7. Geiger Counter = \$2000
8. HDR Soft Ware= \$70,000 (5 year contract)
9. Construction for Dedicated Vault = \$1 Million
- 10.IT costs should be factored in

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Brachytherapy



New Devices: Game Changers?



CHARGE#	DESCRIPTION	QTY	DATE	CHARGE
210004	27506 SURGERY 1 HOUR	1	0827	3926.00
210005	27506 SURGERY ADD MIN	8	0827	288.00
220002	27512 RECOVERY 1/2HOURL	1	0827	765.00
220003	27512 RECOVERY ADD MIN	20	0827	180.00
222001	27512 PRE-OP MNTR	1	0827	248.00
222003	27512 PRE-OP MNTR	1	0827	248.00
222100	27512 RECOVERY OBSERV	1	0827	496.00
222200	27512 POST-OP HOLDING	20	0827	180.00
500330	99202 E&M-NP LVL II	1	0827	57.00
700004	ANES 1 HR	1	0827	1047.00
700005	ANES ADD MIN	8	0827	32.00
902170	72170 PELVIS,LIMITED	1	0827	342.50
905998	76000 FLUOR (<) 1HR	1	0827	392.00
915999	76001 FLUORO>1HR TECH	1	0827	338.50
106950	76950 US GUIDE RAD TX	1	0827	289.00
106965	76965 US GD INSTR	1	0827	289.00
107290	77290 SIMULATION CMPL	1	0827	537.00
107295	77295 3D RECON DOSMTR	1	0827	1813.00
107470	77470 DOSE BRG COMPLX	1	0827	426.50
107732	77332 TX DESIGN SMPL	1	0827	376.00
107370	77370 PHYS SPEC MED C	1	0827	409.00
107470	77470 SPCL TX PROCED	1	0827	1108.00
107550	77778 RADON SEED INSR	1	0827	537.00
107791	77790 ISOTOPE HND SUP*	1	0827	470.00
190014	C1718 IODINE 125 SEE#167	0827	54943.00	
321711	LEVOPLOX 500PMX	1	0827	223.00
32719	90799 MIDAZ2MG/2ML VL	1	0827	46.00
329445	90799 DIPRIVAN 0-20ML	1	0827	119.00
327845	OXVC/ACT2.5/325+	1	0827	14.00
338459	ANUSOL-HC SUPP +	2	0827	24.00
412550	X7700 LUBRICATE JL	1	0827	217.50
414165	X7700 NS IRR 3000ML	1	0827	67.00
420005	X7700 ST IV SEC	1	0827	86.50
420101	X7700 ST IV START	1	0827	42.50
420180	X7700 ST IV ADM PB	1	0827	94.00
42019	X7700 ST IV ADM FLTR	1	0827	120.00
1011550	A9190 LUBRICANT	1	0827	6.50
1024175	BND STKNG THGH	1	0827	129.50
1031220	BG DRN 1 PC	1	0827	39.50
1032745	NDL ANGIO	1	0827	42.00
1034380	SYR BULB 60C	1	0827	50.00
1034390	SYR DIS TOOMEY	1	0827	12.00
1041055	BG URINE DRN	1	0827	42.00
1041145	CATH FOLY2W ALLL	2	0827	261.00
1084065	TRY PREP HP	1	0827	66.50
1162350	DRP SRT BETAD	1	0827	167.00
1162495	DRP TOWEL 4 H/P	2	0827	108.00
1165080	PK CVSTO	1	0827	83.00
1174660	FLTR KIDNEYSTO	1	0827	18.50
1182515	GLV SUR/SPC	2	0827	79.00
JELRAY MEDICAL CENTER P.O. BOX 676817				
TX 75267 95-3720659 0				
J SHAW PT# 004021177 F/C 8				
ADMITTED	08/27/02	DISCHARGED	08/27/02	
CHARGE#	DESCRIPTION	QTY	DATE	CHARGE
1182520	GLV SURGN PR	4	0827	48.00
1184590	PEN SKIN SCRIBE	1	0827	28.50
1185230	SPMG RADIOCOPE	1	0827	20.00
4240268	C1715 NDL BRACHYTRHPY	32	0827	1424.00

\$73,426.50



Title

- Bullets
 - Sub bullets
 - Sub, sub bullets