MICHIGAN DEPARTMENT OF COMMUNITY HEALTH
BONE MARROW TRANSPLANTATION SERVICES
STANDARD ADVISORY COMMITTEE (BMTSAC) MEETING

Wednesday, July 8, 2009

Capitol View Building
201 Townsend Street
MDCH Conference Center
Lansing, Michigan 48913

APPROVED MINUTES

I. Call to Order

Chairperson VeCasey called the meeting to order at 9:06 a.m.

A. Members Present:

Paul Adams, MD, Vice-Chairperson, Self
Aly Abdel-Mageed, MD, Spectrum Health
Adil Akhtar, MD, Beaumont Hospitals
Nalini Janakiraman, MD, Henry Ford Health System
Mary Marks, Alliance for Health
Thomas Ruane, MD, Blue Cross Blue Shield/Blue Care Network
Elna Saah, MD, Michigan State University
Samuel Silver, MD, University of Michigan Health System (left at 11:53 a.m.)
Jeffrey Trent, MD PhD, VanAndel Research Institute
Joseph Uberti, MD PhD, Barbara Ann Karmanos Cancer Institute
Amy Vanderwoude, MD, Cancer & Hematology Centers of West Michigan (left at 11:50 a.m.)
Donald VeCasey, Chairperson, consumer Health Care Coalitiion
Michael Wiemann, MD FACP, St. John Health System

B. Members Absent:

Grant Grace, UAW

C. Michigan Department of Community Health Staff Present:

Jessica Austin
Michael Berrios
Sallie Flanders
Bill Hart
Kasi Kelley
Irma Lopez
Andrea Moore
Tania Rodriguez
Brenda Rogers

II. Declaration of Conflicts of Interests

No conflicts were noted for the record.

III. Review of Agenda

Motion by Dr. Uberti, seconded by Dr. Abdel-Mageed, to accept the agenda as presented. Motion Carried.

IV. Review of Minutes June 2, 2009

Motion by Dr. Ruane, seconded by Dr. Abdel-Mageed, to accept the minutes as presented. Motion Carried.

V. Review Charge and SAC Timeframe

Chairperson VeCasey gave an overview of the Charge and SAC Timeframe. Discussion followed.

VI. Data Pertaining to Access, Quality & Cost on Bone Marrow Transplant Presentation

Dr. Akhtar and Dr. Wiemann provided an oral and written presentation (Attachment A).

Discussion followed.

Public Comments:
Dr. Roland Chu, Children's Hospital of Michigan
Dr. Herman Gray, Children's Hospital of Michigan
Montana Schultz, Beaumont Hospital
Barbara Jackson, Blue Cross Blue Shield of Michigan
Bret Jackson, Economic Alliance of Michigan

Break at 10:47 a.m. – 11:00 a.m.

VII. Need for Bone Marrow Transplant Service in Western Michigan Presentation

Richard Funnell, Spectrum Health Hospitals, provided an oral and written presentation (Attachment B).

Discussion followed.

VIII. Challenges of Running Small BMT Programs Presentation

Dr. Janakiraman, Director of the BMT Program, Henry Ford Health System, provided an oral and written presentation (Attachment C).

Discussion followed.

IX. Public Comment

None.

X. SAC Member Discussion

Members discussed whether or not to regulate Bone Marrow Transplantation (BMT) Services with Certificate of Need. Three major issues were addressed: Cost, Quality, and Access.

XI. Next Steps

Dr. Weimann and Dr. Akhtar will present a facility based methodology at the next meeting. Additionally, members will discuss a different need base Methodology and West Michigan proposed Methodology.

Public Comment:
Bob Meeker, Spectrum Health

XII. Future Meeting Dates

July 29, 2009
August 28, 2009
September 24, 2009
October 22, 2009
November 18, 2009

XIII. Adjournment

Motion by Vice-Chairperson Adams, seconded by Dr. Abdel-Mageed, to adjourn the meeting at 1:08 p.m. Motion Carried.

Attachment A

Data Pertaining to Access, Quality & Cost on Bone Marrow Transplant

BMT SAC

July 8, 2009

Attachment A

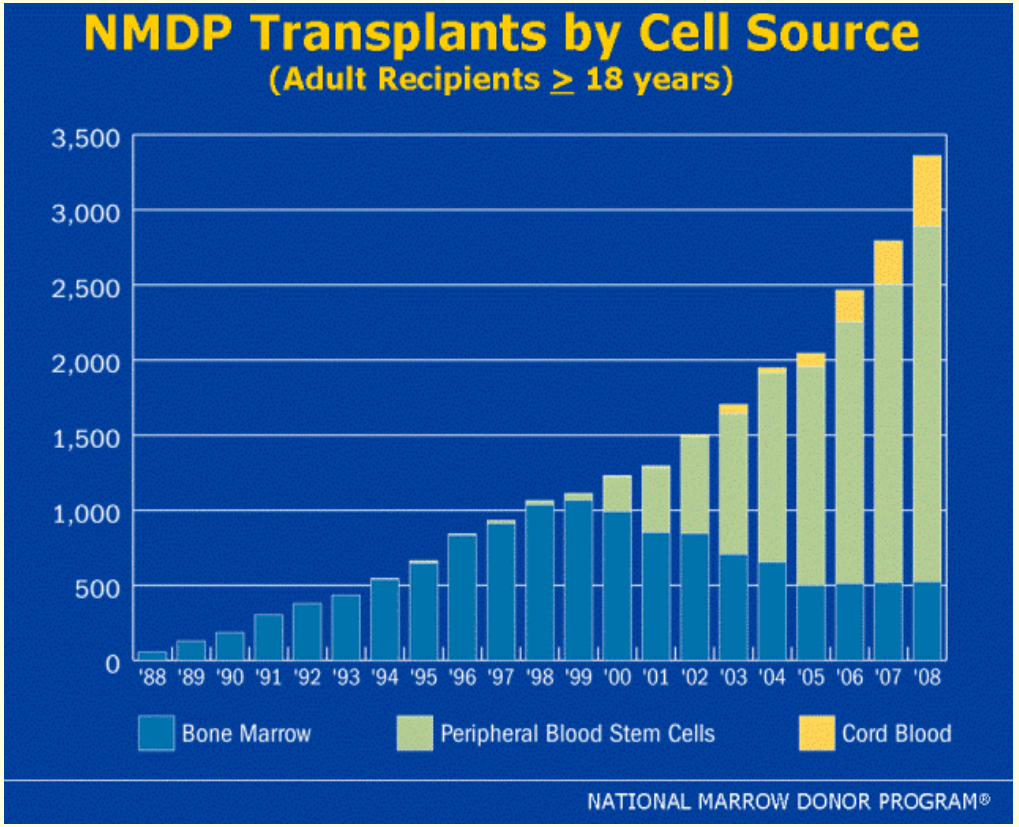
BMT Should Not Be a CON Covered Clinical Service

- BMT is a vastly underutilized procedure: The New England Journal of Medicine
  - Older patients can now receive this life-saving treatment
- Patients should not have to leave their primary oncologists if hospitals have capability of performing BMT
- Only 9 states regulate BMT none of which arbitrarily limit the number of BMT programs
- Opportunity for life-saving treatment with BMT is not limited by a finite number of available organs, as with other transplant programs

Attachment A

BMT No Longer An Experimental Treatment for Cancer Patients

- First BMT took place in 1968, over 40 years ago. No longer a service limited to academic research centers, now considered a routine standard of care for many diseases.
- Today, most stem cell transplantations are performed by harvesting stem cells from blood. Peripheral Blood Stem Cell Transplantation (PBSCT) is cheaper, safer and better than bone marrow stem cell transplantation.



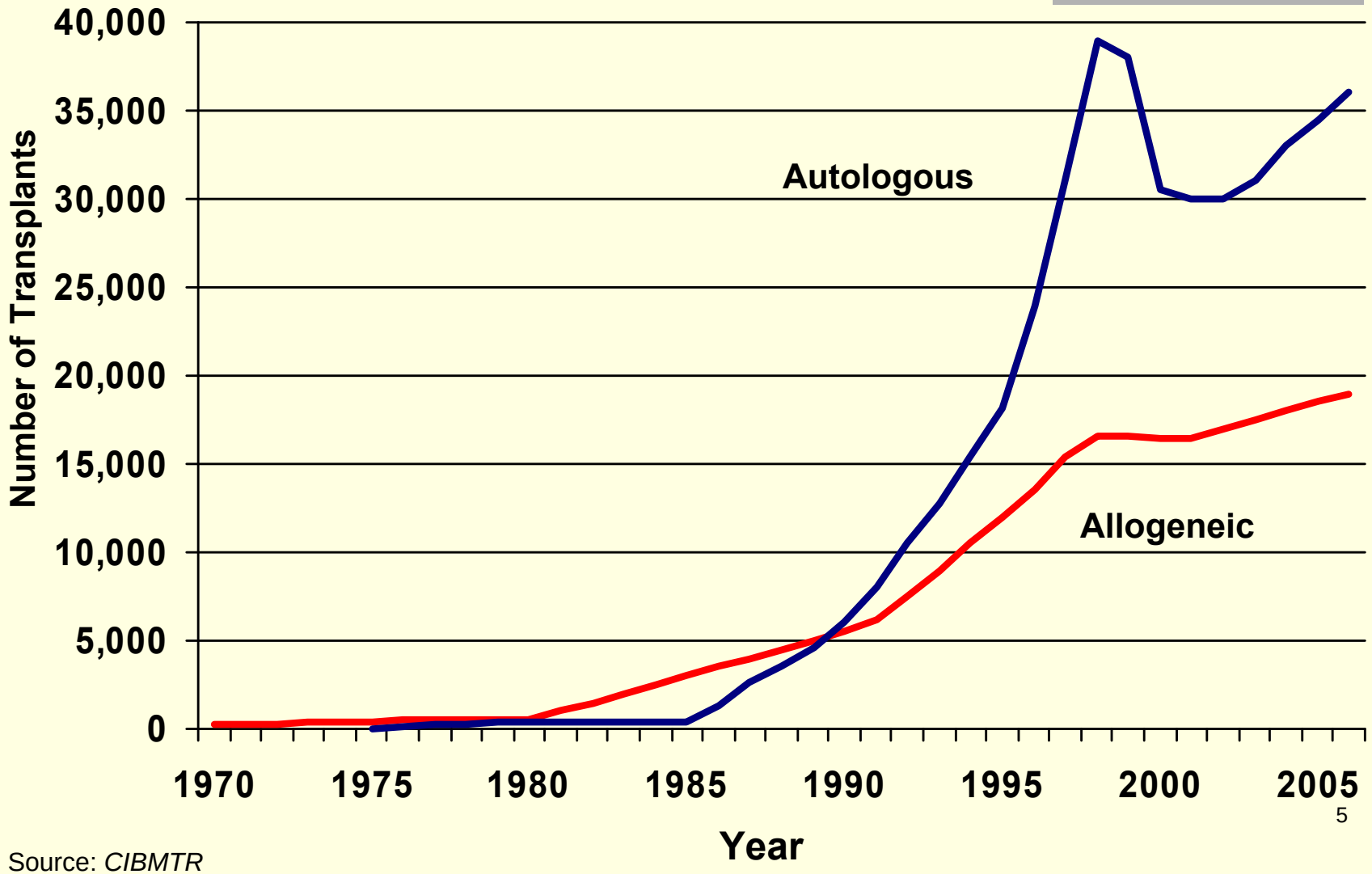
St. John Hospital largest center collecting cord blood from minority patients

The Need for Access

- National Bone Marrow Registry has increased to more than 11 million registered donors, which will result in more BMTs
- No reason patients should be referred away from primary oncologist if that hospital can provide BMT, especially given:
  - No correlation between BMT CON regulation and its impact on cost or quality
  - Available capacity is not a criterion in other CON standards (e.g. pancreas transplants)
  - No potential for BMT “excess utilization”

Attachment A

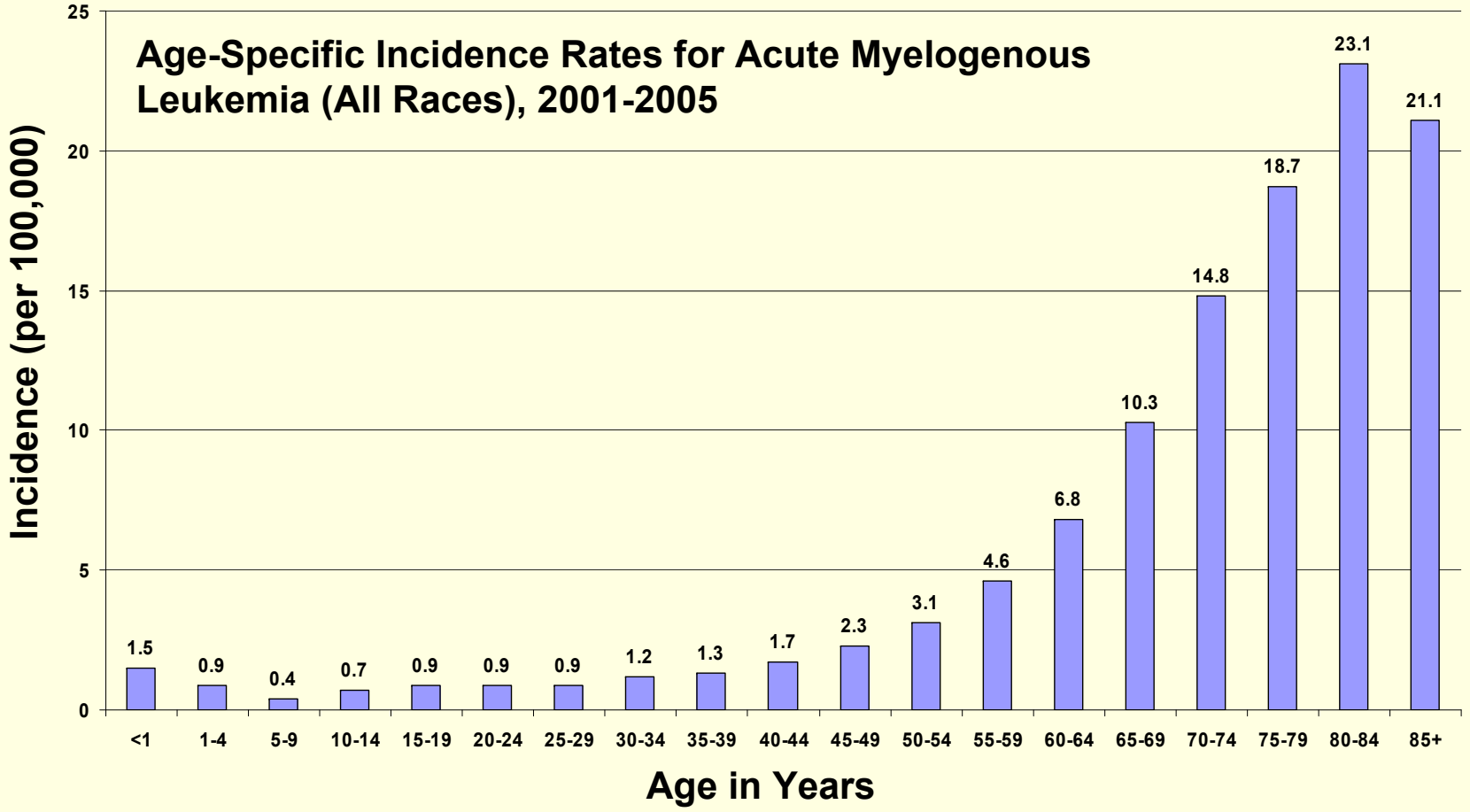
Bone Marrow Transplants are Increasing Worldwide



Source: *CIBMTR*

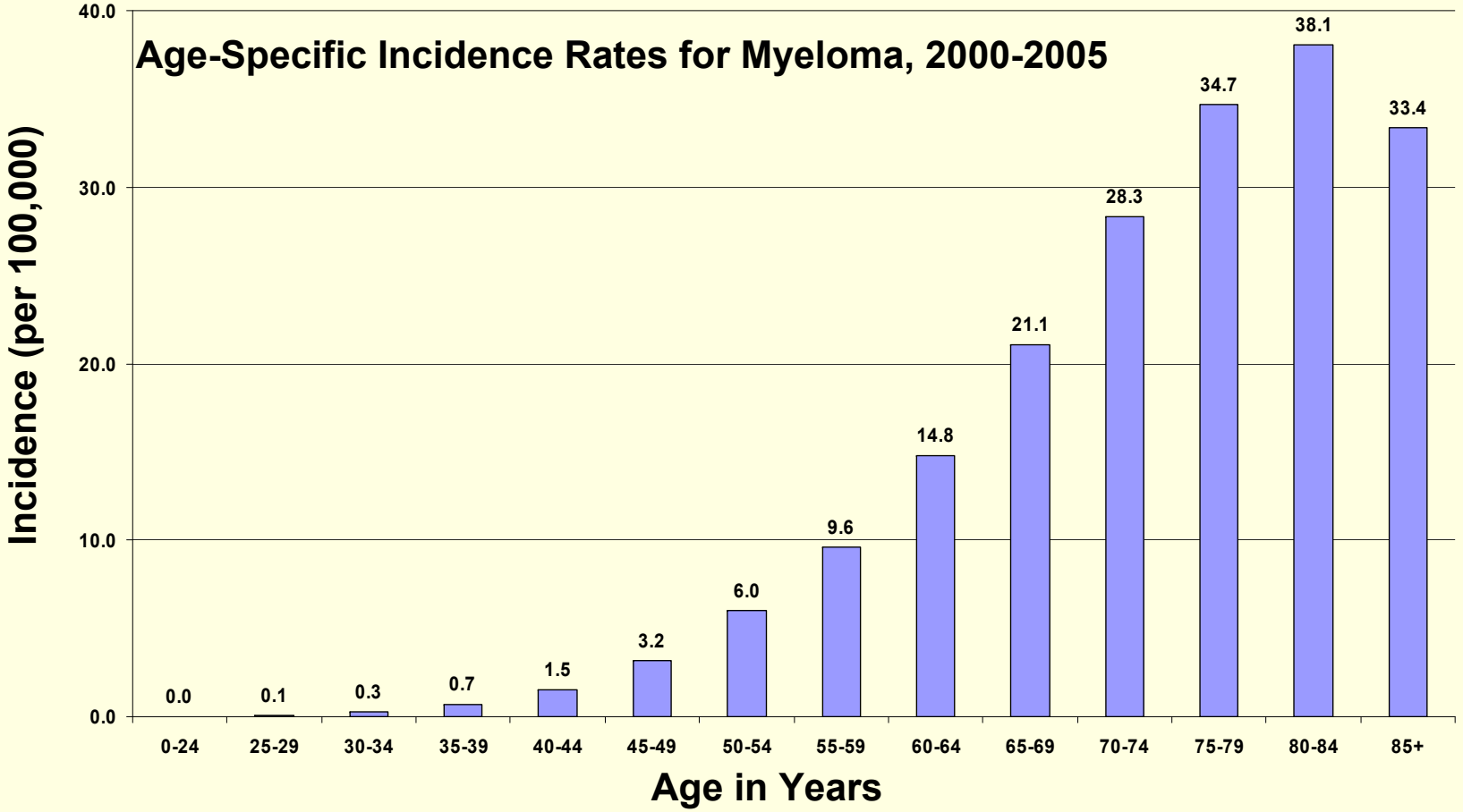
Attachment A

As Our Population Ages, More Seniors Getting Cancer that Can Be Treated With BMT



Source: *SEER (Surveillance, Epidemiology and End Results) Cancer Statistics Review 1975-2005, National Cancer Institute, 2008*

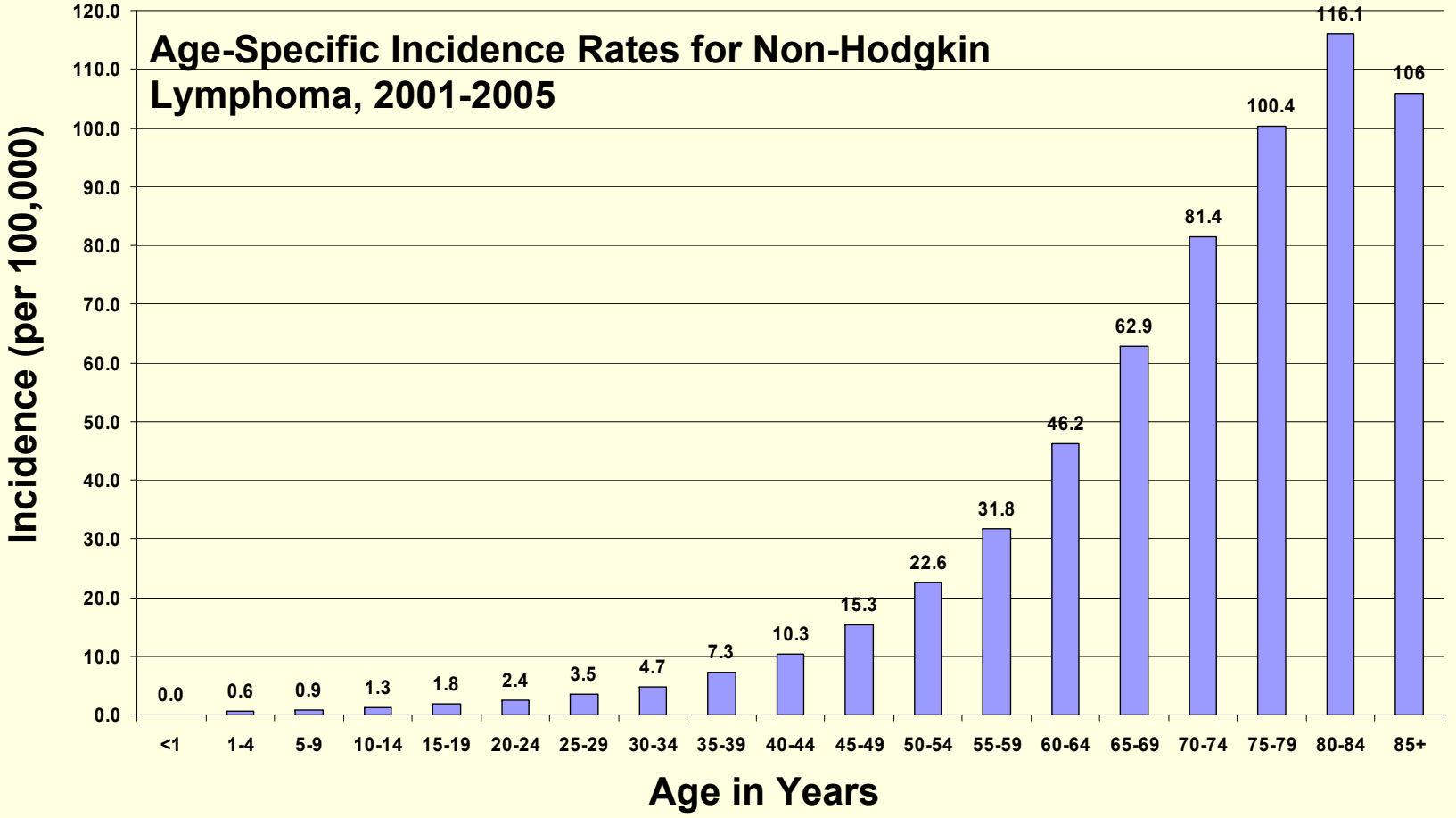
As Our Population Ages, More Seniors Getting Cancer that Can Be Treated With BMT (Continued)



Source: *SEER (Surveillance, Epidemiology and End Results) Cancer Statistics Review 1975-2005, National Cancer Institute, 2008*

**<16 cases for each age and time interval, SEER 17 areas(<1, 1-4, 5-9, 10-14, 15-19, 20-24)*

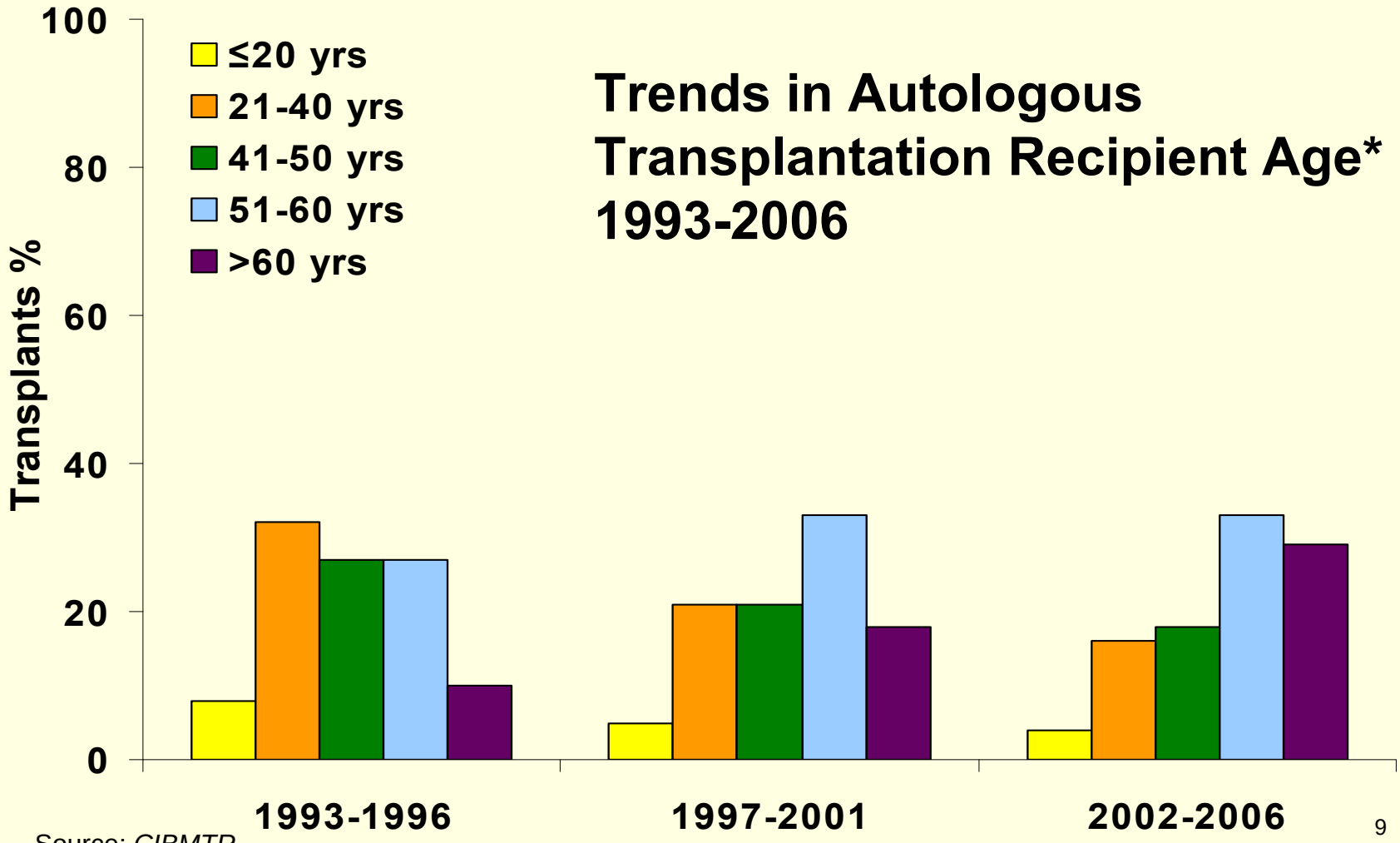
As Our Population Ages, More Seniors Getting Cancer that Can Be Treated With BMT (Continued)



Source: *SEER (Surveillance, Epidemiology and End Results) Cancer Statistics Review 1975-2005, National Cancer Institute, 2008*

**<16 cases for each age and time interval*

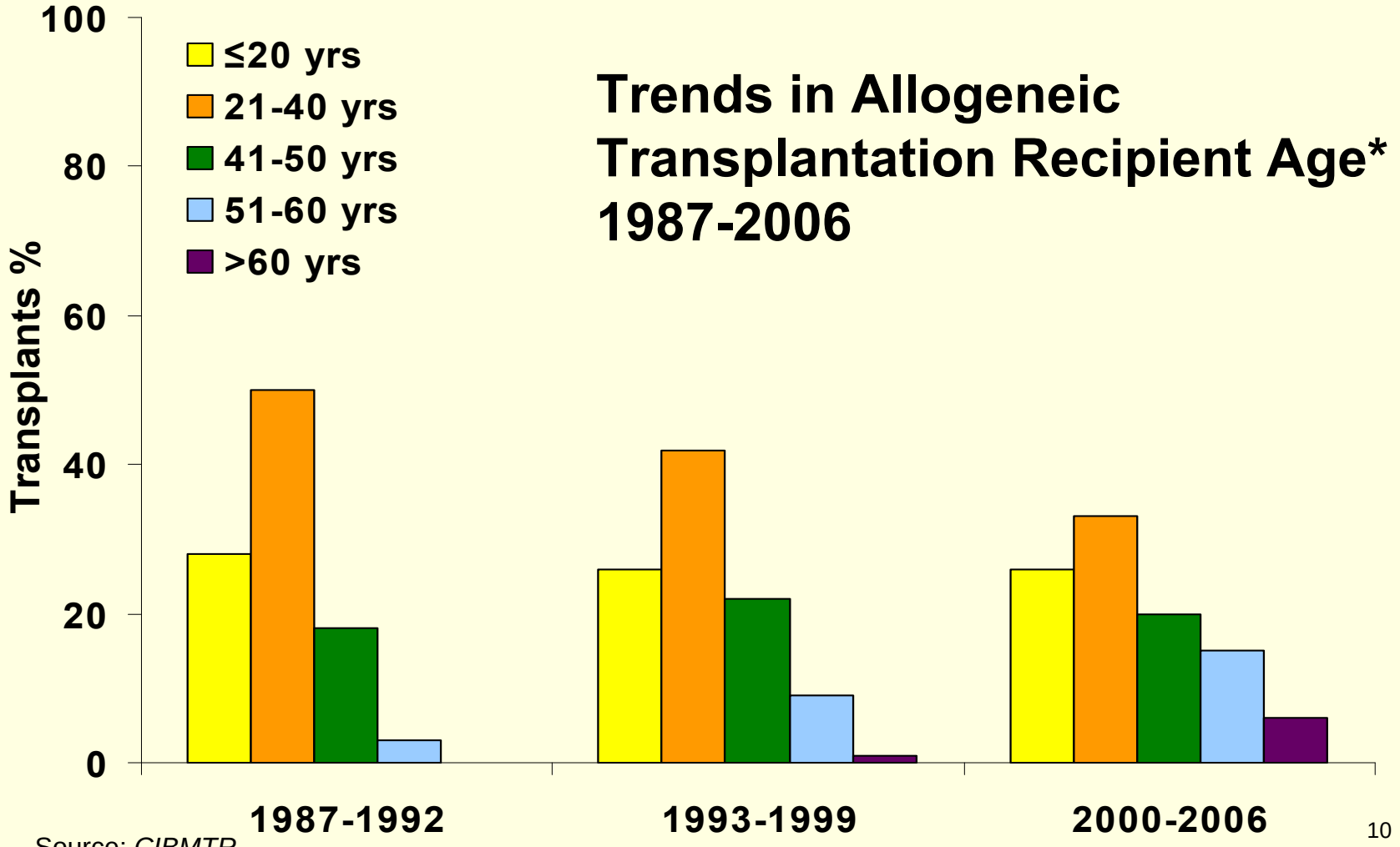
Older Patients Increasingly Eligible for BMT



Source: *CIBMTR*

* Transplants for AML, ALL, NHL, Hodgkin disease, Multiple Myeloma

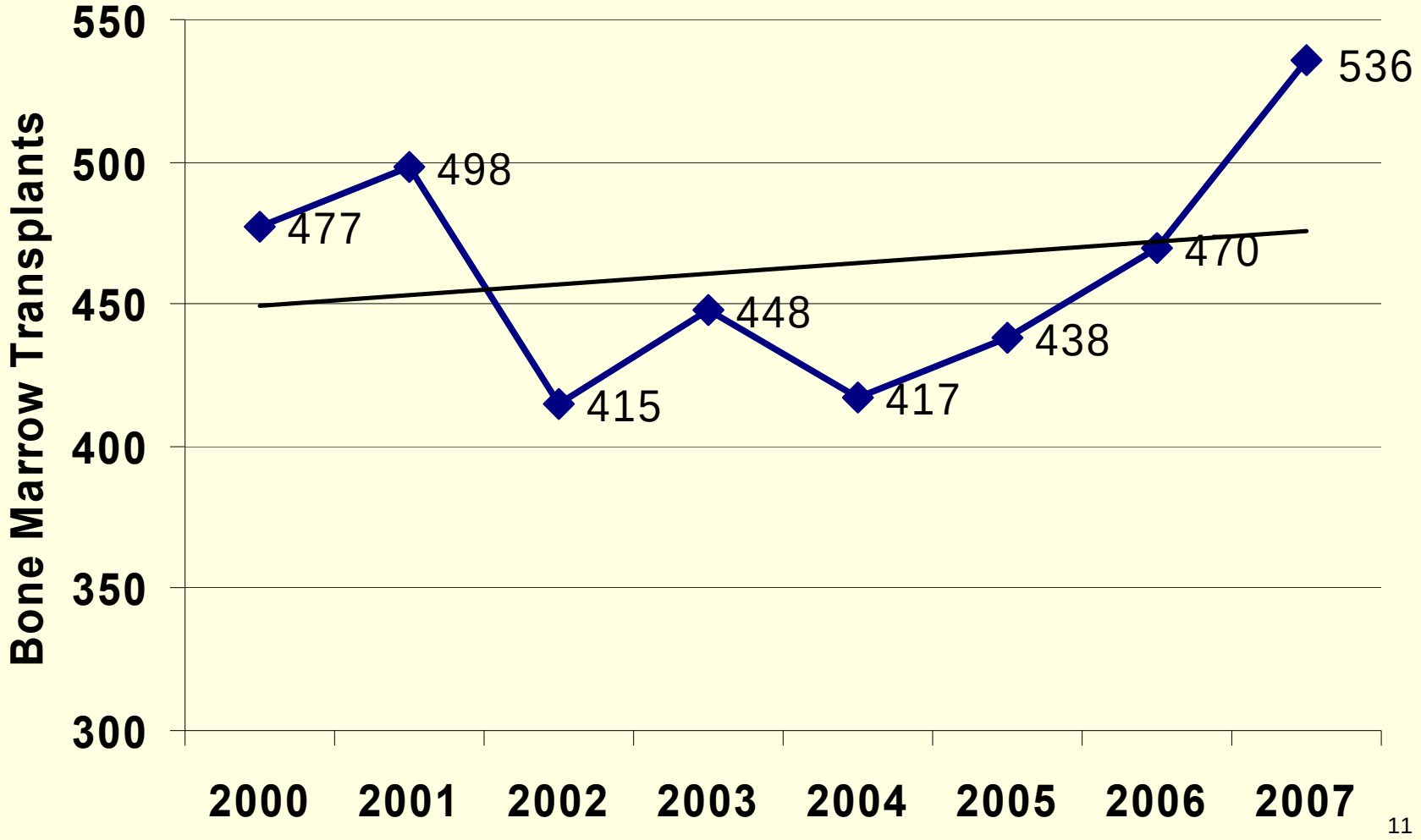
Older Patients Increasingly Eligible for BMT (Continued)



Source: *CIBMTR*

* Transplants for AML, ALL, CML

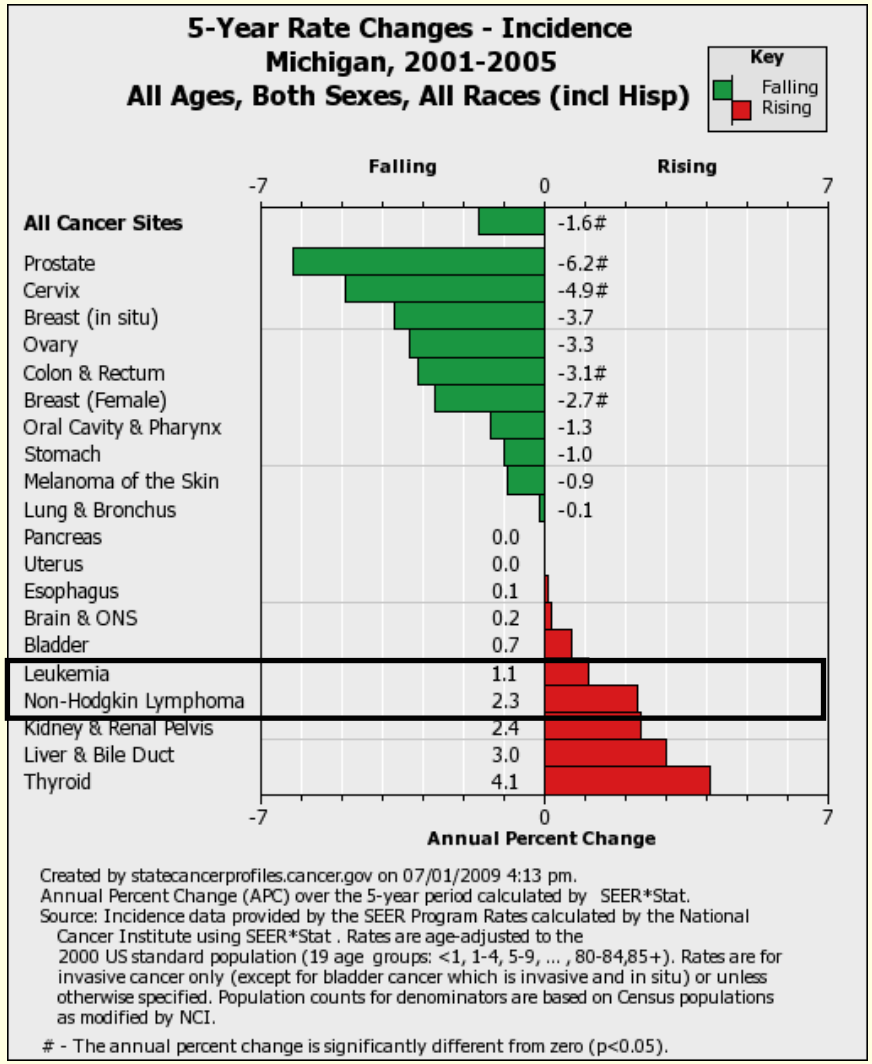
BMTs are Increasing in Michigan



Source: *MDCH*

Attachment A

Annual Percentage Change in Cancer Incidence



- Michigan experiencing rising rates of Leukemia and Non-Hodgkin Lymphoma

Attachment A

Michigan Ranks High in BMT Eligible Cancer Incidence and Death Rates

Incidence Rates*				
	Michigan	**Nation**	**Diff**	**Rank**
Hodgkin's Lymphoma	**3.2**	**2.8**	**0.4**	**11**
Non-Hodgkin's Lymphoma	**21.4**	**18.9**	**2.5**	**3**
Leukemia	**13.6**	**11.6**	**2.0**	**7**
Myeloma	**6.0**	**5.4**	**0.6**	**10**

Death Rates*				
	Michigan	**Nation**	**Diff**	**Rank**
Hodgkin's Lymphoma	**0.5**	**0.5**	**0.0**	**10**
Non-Hodgkin's Lymphoma	**8.2**	**6.9**	**1.3**	**1**
Leukemia	**8.0**	**7.2**	**0.8**	**8**
Myeloma	**3.8**	**3.6**	**0.2**	**18**

*Rates are per 100,000

Source: Centers for Disease Control and Prevention and National Cancer Institute, 2005 data

Myth #1: BMT Regulation Lead to Higher Volumes Per Program

- States with and without BMT CON regulation perform at least 10 times FACT minimum volumes
- Nationwide BMT Programs
  - State of Michigan= 110 BMT/program
  - States w/ BMT CON regulation= 100 BMT/program
  - States w/o BMT CON regulation= 128 BMT/program
- Data shows that a substantial number of BMTs per program are performed in states with and without CON regulation of BMT per program

Source: National Marrow Donor Program

Myth #2: CON Regulated BMT Programs Lead to Better Outcomes

- Measurement: weighted average index (WAI)
  - WAI = (Actual Survival/Expected) * (Severity Adjusted)
    - 1.00 = actual survival same as expected survival
    - >1.00 = actual survival better than expected survival
    - <1.00 = actual survival less than expected survival
- Nationwide BMT Programs
  - State of Michigan= 0.93
  - States with BMT CON regulation= 1.01
  - States without BMT CON regulation= 1.00
- Data shows that BMT outcomes are not impacted by CON

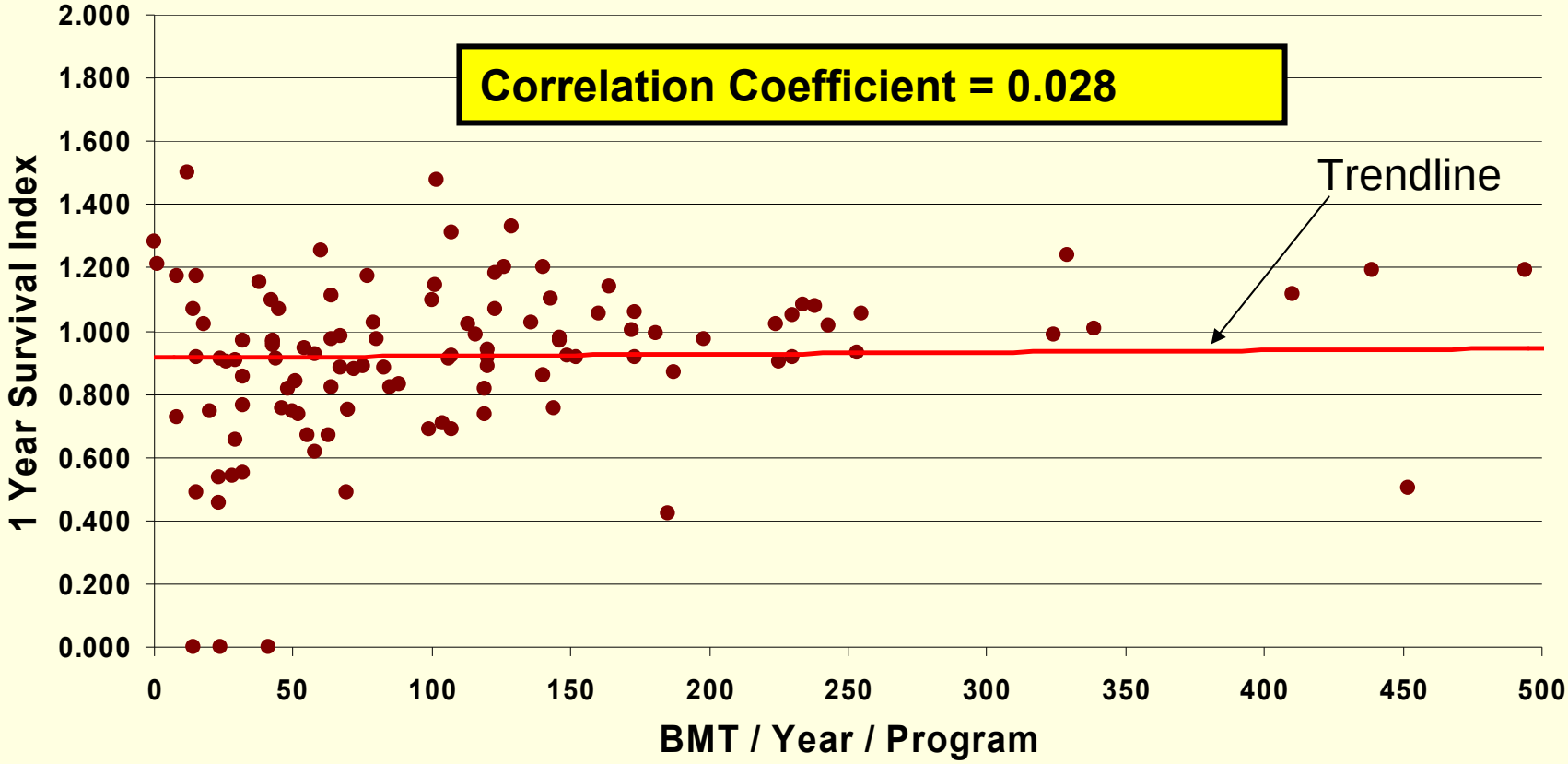
Source: National Marrow Donor Program

Quality Oversight

- Two national organizations provide quality measures for BMT programs
  - Foundation for Accreditation of Cellular Therapy
  - Center for International Blood and Marrow Transplant Research
- National requirements exceed those of Michigan CON
- Additional BMT programs will not negatively impact patient care
  - No correlation between procedure volumes and outcomes for transplant
  - Pancreas standards its minimum CON volume recently reduced from 12 to 2
  - Regardless, the minimum BMT volumes are only 10

Attachment A

No Correlation Between 1 Year Survival and Annual BMTs / Program



Source: National Marrow Donor Program

Cost of BMT vs. Alternative Treatments

- BMT cost is no more expensive than the cost of unregulated chemotherapy
  - Many of these chemotherapeutic drugs must be given for the duration of the patient's life
  - Copays and deductibles are often so high that the patient chooses BMT as a more cost effective way to treat

Attachment A

Annual BMT Program Costs vs. Alternative Treatment Costs

- St. Vincent Hospitals and Health Services provided 24 patients with BMT services during a recent 12-month period at an average cost of $43,646

Department		Costs
Bone Marrow	$	401,990
Laboratory		61,693
Blood Products		52,496
Pharmacy		463,232
Misc Other		68,094
Total	$	1,047,505
Cost per Patient	**$**	**43,646**

- Alternative treatment cost estimates:
  - > Imatinib (3-5 year treatment) $90,000-$150,000
  - > R-hyper CVAD $32,000 plus costs associated with a 36 day inpatient stay.

Source: St. Vincent Hospitals and Health Services, MD Anderson, HagibKantarjian

Attachment A

BMT Program - Equipment & Infrastructure Requirements

Total projected Facility Cost	
Facility	**Total**
Patient Rooms	$476,795
Cell Processing Lab	$241,779
Cell Collection Facility	$175,200
Subtotal	**$893,200**

- Specific amount of investment depends on the hospital's existing structural and technological capabilities and the intended size of the program
- A new BMT program of average size would require nearly $900,000 in start-up expenses and $400,000 in annual maintenance and operational fees, falling into three major areas:
  - An outpatient unit where stem cell cells are harvested
  - A stem cell laboratory where harvested cells are processed and frozen
  - An inpatient department where patients receive treatment and are housed during hospital stay
- These estimated costs do not take into account the price of necessary construction—hepa-filtration and infection control measures will increase construction costs.
- Partnering with a blood collection and/or processing lab can be an effective strategy to contain initial capital investments

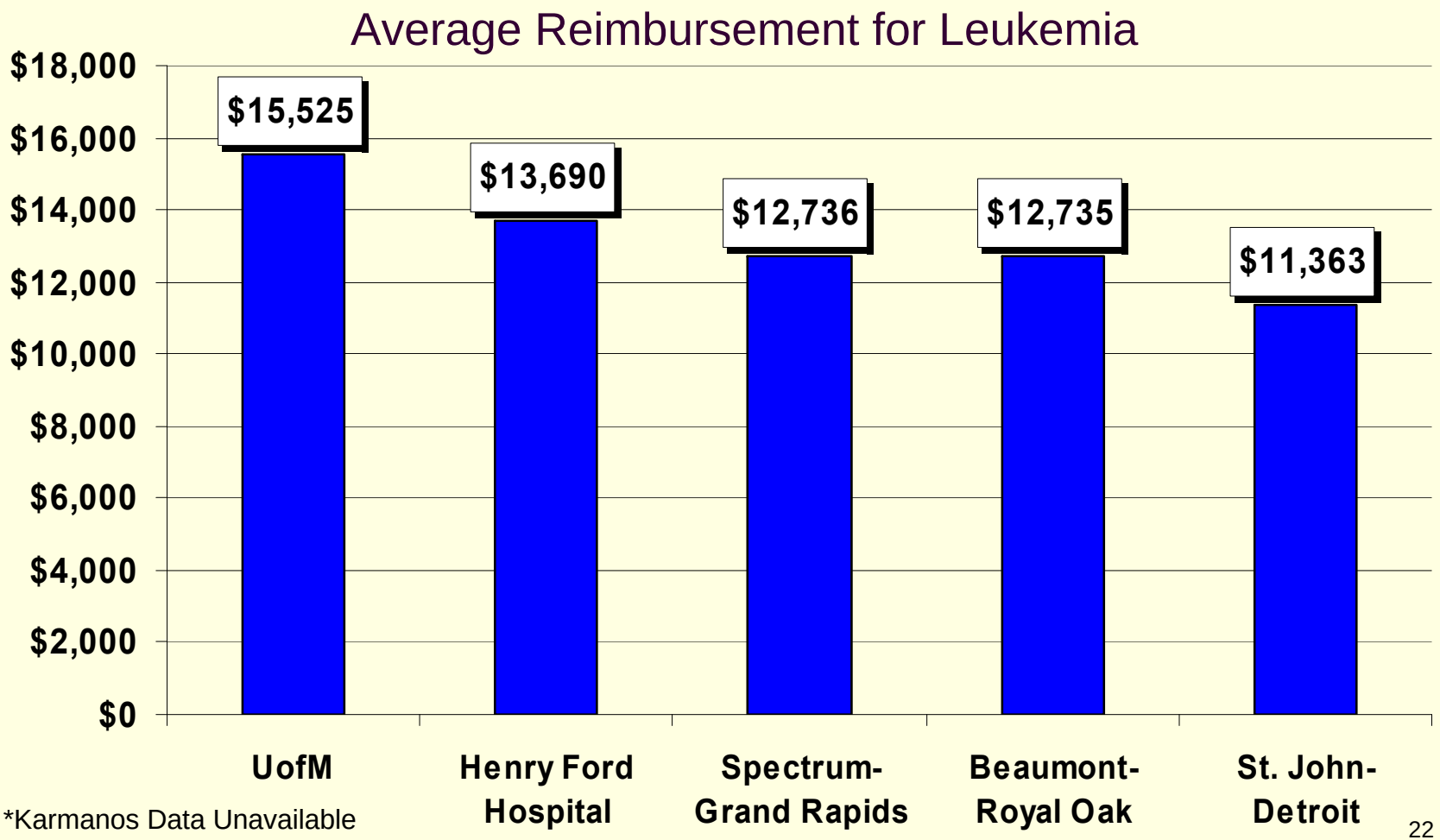
Source: The Advisory Board, March 10, 2009.

Current Standards Result in a Negative Impact on Cost

- Expensive tests are routinely repeated when referring a patient from one health system to another (despite claims to the contrary)

Attachment A

Existing BMT Providers Not the Most Cost Effective for Payers



*Karmanos Data Unavailable

Source: 2007 Med Par Data, DRG 403

New Cancer Cases by Provider

Tumor Registry	# New Cancer Cases- 2007
University of Michigan	4,985
Beaumont	4,474
St. John Health System	4,100
Henry Ford	3,584
Spectrum	2,833
Harper/Karmanos	2,044
Oakwood	1,602

Source: American Cancer Society- 2007 Tumor Registry

Attachment A

SJHS Significant Provider of Cancer Care in Michigan

- SJHS diagnosis over 4,000 new cancer cases annually; More than the number diagnosed by other BMT providers in Michigan
- SJHS provides 43,000 radiation therapy treatments for about 2,000 patients annually
- SJHS has three GME teaching programs including 9 Fellows in Medical Oncology and Hematology

Attachment A

Providence and St. John Hospital Should Generate Over 70 BMTs

Diagnosis	New Cancer Cases	% eligible for BMT	Volume Projection
Non-Hodgkin's	103	23%	24
Hodgkin's	20	9%	2
Acute Leukemia (ALL)	5	50%	2
Acute Leukemia (AML)	24	50%	12
Chronic Leukemia (CML)	4	10%	0
Multiple Myeloma	44	50%	22
Myelodysplastic Syndrome	27	33%	9
Total	**227**		**71**

Note: This methodology could serve as a basis for institutional specific methodology.

Source: SJHS 2007 data

Beaumont Qualified to Offer BMT

- Largest radiation oncology provider in the state
- Second largest tumor registry (new cancer cases)
- Beaumont designated by BCBSM as Center for Rare and Complex Cancers
  - One of two hospitals in state with this designation
- Beaumont is 1 of 50 cancer centers in U.S. with a Community Clinical Oncology Program
- Infrastructure for BMT largely in place (facilities, staffing)
- Beaumont is already a tertiary organ transplant center (kidney, liver)
- Two John Hopkins trained medical oncologists experienced in BMT

Attachment A

Beaumont Patients Alone Should Generate Over 100 BMTs

Diagnosis	New Cancer Cases	% eligible for BMT	Volume Projection
Non-Hodgkin's	194	23%	45
Hodgkin's	46	9%	4
Acute Leukemia (ALL)	13	50%	7
Acute Leukemia (AML)	46	50%	23
Chronic Leukemia (CML)	18	10%	2
Multiple Myeloma	39	50%	20
Myelodysplastic Syndrome	10	33%	3
Total	**366**	**28.4%**	**104**

Note: This methodology could serve as a basis for institutional specific methodology.

Source: Beaumont Oncology Department, 2007 data

Attachment A

Beaumont Collaborates with other Hospitals to Provide Cancer Treatment

May 28, 2009

Dear Commissioner:

On behalf of Botsford Hospital, I am writing with regard to the Certificate of Need Standards for bone marrow transplant (BMT) programs. Botsford is supportive of modifying the CON standards in any way that would enable Beaumont Hospitals to begin a BMT program.

Beaumont and Botsford have entered into an agreement where radiation oncologists from Beaumont are providing services at the Botsford Cancer Center. Our oncologists are also referring complex radiation cases to Beaumont for treatment. We are collaborating to provide high-quality medical care services to our patients without duplicating costs.

Because of the relationships that have developed between our oncologists and Beaumont oncologists, being able to keep our patients who may need BMTs within our network is important: we would have the opportunity to keep our patients in familiar surroundings and with their own doctors. Having to send our patients to another health care system where we have less formal and less developed relationships does not serve the best interests of our cancer patients.

We believe care patients in the state would be best served by allowing large cancer programs like Beaumont to offer BMT services.

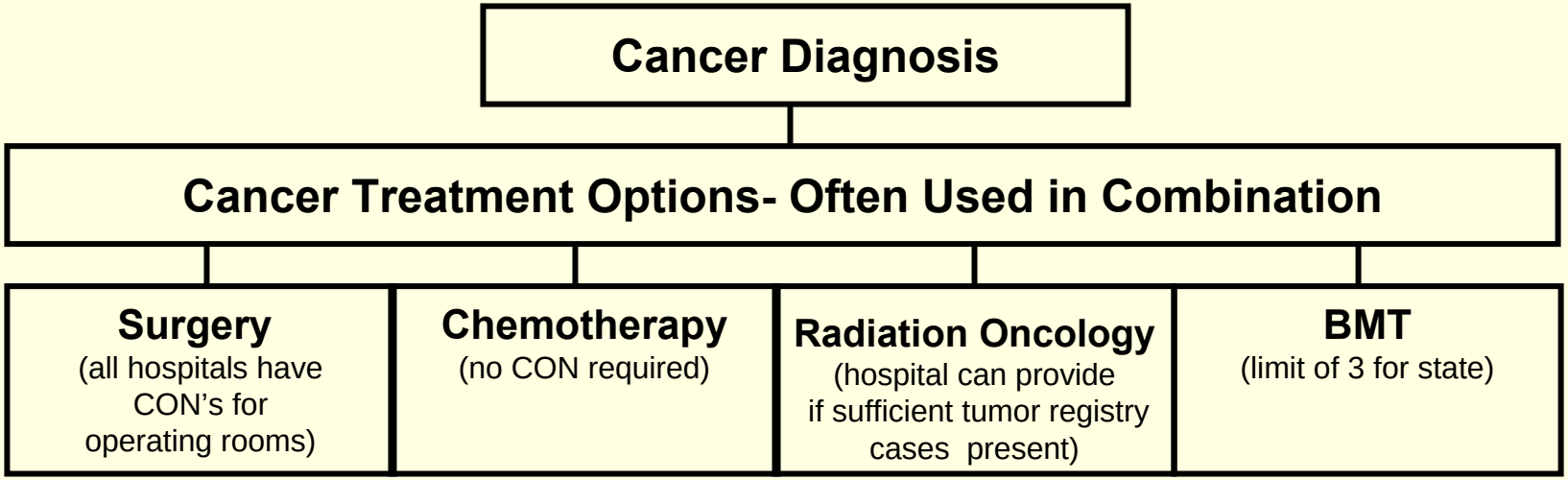
- PAUL E. LACASSE, D.O., M.P.H.
President & C.E.O.

Conclusions

- Eliminating the use of CON to regulate BMT will not lead to an explosion of programs
- Costs are not influenced by whether or not BMT programs are regulated by CON
- Programs in states with and without BMT CON regulation perform far above FACT minimum requirements
- BMT CON regulations have no impact on BMT outcomes

Attachment A

BMT is the Only Cancer Treatment Option with Program Limit



Pancreas transplant	**based on**	**kidney transplants**
PET*	**based on**	**tumor registry cases**
ESWL*	**based on**	**urological discharges**
Open heart	**based on**	**cardiac discharges**
Radiation oncology	**based on**	**tumor registry cases**
BMT	**based on**	**statewide limit of 3**

*methodology changed from comparative review to institution specific

Attachment A

Integrity of CON Program on the Line

- BMT standards are arbitrary- no fact-based need methodology to support any fixed number of BMT programs
- CON standards in Michigan have shifted from comparative review towards institution specific criteria (pancreas transplants, PET, urinary lithotripsy, etc.)

BMT "3" Programs (Comparative Review)		Pancreas Transplant 80 Kidney Transplants in two Years (Institution Specific)

Attachment A

Increased BMT Access = Lives Saved

"[…]data from the Center for International Blood and Marrow Transplant Research show that many patients undergo transplantation belatedly, when a cure is less likely. Other data from the center and data from the National Cancer Institute suggest that only a minority of patients with a relapse responsive to chemotherapy ever undergo autologous transplantation. This finding agrees with that of a report from 2001 and with the expert opinion that transplantation is broadly underused. The General Accounting Office estimates that in the United States, only one third of patients who need transplants from unrelated donors have preliminary searches requested from the National Marrow Donor Registry"

Source: New England Journal of Medicine, April 27, 2006. p. 1823

Request

- We ask that the BMT SAC recommend removal of BMT from CON coverage
- If not eliminated, establish institution specific need methodology to assure access
- Allow more patients to take advantage of life-saving technology
- Access can be increased without negative impact on cost and quality

Attachment A

BMT Transplant Centers by State

Transplant Center Name	City	State	BMT CON	# BMTs	CON State	Low Cost	High Cost	Peds/Adult	# Pts with Survial Data	Complex	Actual Survial %	Expected Survial %	Low Range	High Range	Index	Pts. Survived	Pts. Deceased
Cedars-Sinai Medical Center	Los Angeles	CA	No	99	No	$28,410	$88,440	Adult	15	4	33.3%	48.4%	25.5%	70.9%	0.688	5	10
Scripps Green Hospital	La Jolla	CA	No	23	No	$28,410	$88,470	Adult	8	5	25.0%	46.6%	13.2%	79.7%	0.536	2	6
UCSD Medical Center	La Jolla	CA	No	107	No	$37,575	$111,965	Adult	54	4	46.3%	50.2%	37.4%	63.1%	0.922	25	29
Presbyterian/St. Lukes Medical Center	Denver	CO	No	160	No	$39,790	$90,100	Adult	77	4	52.2%	49.4%	38.9%	60.0%	1.057	40	37
St. Francis Hospital and Health Centers	Beech Grove	IN	No	67	No	$46,110	$97,580	Adult	40	5	42.5%	48.0%		63.2%	0.885	17	23
Hahnemann University Hospitals	Philadelphia	PA	No		No			Adult	3	1	66.7%	68.4%	15.0%	100.0%	0.975	2	1
Temple University	Philadelphia	PA	No	75	No	$28,120	$40,620	Adult	49	4	44.9%	50.5%	37.2%	63.5%	0.889	22	27
Thomas Jefferson University Hospital, Inc.	Philadelphia	PA	No	69	No	$16,335	$47,215	Adult	36	4	25.4%	52.0%	36.8%	67.3%	0.488	9	27
University of Pennsylvania Medical Center	Philadelphia	PA	No	152	No	$26,985	$26,985	Adult	100	2	51.0%	55.6%	46.3%	65.1%	0.917	51	49
University of Pittsburgh Cancer Center	Pittsburgh	PA	No	146	No	$148,101	$152,155	Adult	118	5	44.9%	45.8%	37.6%	54.4%	0.980	53	65
Western Pennsylvania Cancer Institute	Pittsburgh	PA	No		No			Adult	62	4	35.4%	49.6%	37.6%	61.9%	0.714	22	40
Avera McKennan Transplant Institute	Sioux Falls	SD	No	0	No	$91,380	$106,950	Adult	8	2	75.0%	58.5%	26.0%	90.5%	1.282	6	2
Baylor University Medical Center	Dallas	TX	No	234	No	$54,826	$116,273	Adult	223	4	52.4%	48.4%	42.2%	54.9%	1.083	117	106
The University of Texas	Dallas	TX	No	60	No	$28,410	$88,470	Adult	32	5	56.1%	44.7%	28.0%	61.4%	1.255	18	14
LDS Hospital	Salt Lake City	UT	No	58	No	$28,690	$62,800	Adult	9	3	33.3%	53.9%	21.2%	86.5%	0.618	3	6
University of Arkansas for Medical Sciences	Little Rock	AR	No	770	Yes	$34,090	$105,946	Adult	13	5	7.7%	47.9%	22.0%	72.8%	0.161	1	12
Yale University/Yale New Haven Hospital	New Haven	CT	No	123	Yes	16335	$47,215	Adult	78	3	65.0%	54.9%	44.5%	65.5%	1.184	51	27
Christiana Care Health Services	Newark	DE	No	28	Yes	$34,235	$34,235	Adult	20	5	25.0%	46.3%	25.6%	66.7%	0.540	5	15
H. Lee Moffitt Cancer Center & Research Inst.	Tampa	FL	Yes	243	Yes	$61,685	$61,685	Adult	130	3	54.0%	53.1%	44.9%	61.4%	1.017	70	60
Mayo Clinic Jacksonville/Mayo Hospital	Jacksonville	FL	Yes	32	Yes	$28,410	$88,440	Adult	1	3	54.9%	100.0%	0.0%	100.0%	0.549	1	0
Emory University Hospital	Atlanta	GA	No	181	Yes	$31,855	$66,035	Adult	99	4	47.5%	47.8%	38.4%	57.4%	0.994	47	52
Northside Hospital	Atlanta	GA	No	126	Yes	$39,446	$101,923	Adult	35	2	68.6%	57.0%	40.9%	73.0%	1.204	24	11
Northwestern Memorial Hospital	Chicago	IL	No	238	Yes	$67,414	$77,168	Adult	65	4	52.0%	48.3%	36.4%	60.2%	1.077	34	31
Rush-Presbyterian/St. Luke's Medical Center	Chicago	IL	No	101	Yes	$55,977	$55,977	Adult	38	5	52.6%	45.9%	31.3%	61.0%	1.146	20	18
Tulane University Hospital and Clinic	New Orleans	LA	No	24	Yes	$74,952	$126,509	Adult	1	5	0.0%	33.0%	0.0%	100.0%	0.000	0	1
Beth Israel Deaconess Medical Center	Boston	MA	No	67	Yes	$46,550	$79,075	Adult	60	4	50.0%	50.8%	39.4%	62.7%	0.984	30	30
Massachusetts General Hospital	Boston	MA	No	65	Yes			Adult									
UMASS Memorial Health Care	Worcester	MA	No	26	Yes	$46,165	$88,690	Adult	36	3	49.7%	55.0%	39.6%	70.9%	0.904	18	18
Greenebaum Cancer Center	Baltimore	MD	Yes	104	Yes	$28,410	$88,470	Adult	37	5	32.4%	45.9%	30.5%	61.4%	0.706	12	25
Henry Ford Health System	Detroit	MI	Yes	32	Yes	$28,410	$88,440	Adult	29	5	37.9%	44.3%	27.0%	62.0%	0.856	11	18
Karmanos Cancer Institute	Detroit	MI	Yes	230	Yes			Adult	176	3	47.7%	52.1%	45.3%	59.2%	0.916	84	92
St. Louis University Hospital	St. Louis	MO	No	15	Yes	$150,854	$150,854	Adult	18	5	41.7%	45.5%	24.0%	67.2%	0.916	8	10
St. Luke's Blood & Marrow Transplant Program	Kansas City	MO	No	8	Yes	$82,043	$141,645	Adult	60	3	63.1%	53.8%	41.8%	66.0%	1.173	38	22
Dartmouth-Hitchcock Medical Center	Lebanon	NH	No	41	Yes	$16,335	$93,300	Adult	1	1	0.0%	65.0%	0.0%	100.0%	0.000	0	1
Robert Wood Johnson University Hospital	New Brunswick	NJ	No		Yes	$28,410	$88,470	Adult	18	1	50.0%	59.2%	37.5%	80.8%	0.845	9	9
Montefiore Medical Center	Bronx	NY	Yes	69	Yes	$29,550	$87,800	Adult									
New York Presbyterian Hospital at Cornell	New York	NY	Yes	107	Yes	$44,750	$117,500	Adult	25	5	32.0%	46.5%	28.1%	65.3%	0.688	8	17
North Shore University Hospital	Manhasset	NY	Yes	63	Yes	$16,335	$47,215	Adult	18	4	33.3%	49.8%	27.8%	72.3%	0.669	6	12
Arthur G. James Cancer Hospital	Columbus	OH	No	172	Yes	$34,169	$106,170	Adult	99	2	59.6%	59.4%	50.4%	68.7%	1.003	59	40
The Jewish Hospital	Cincinnati	OH	No	83	Yes	$66,825	$92,826	Adult	39	2	51.3%	58.0%	43.1%	73.1%	0.884	20	19
Roger Williams Medical Center	Providence	RI	Yes	14	Yes	$28,750	$53,100	Adult	1	4	0.0%	48.4%	0.0%	100.0%	0.000	0	1
UT Blood & Marrow Transplant Center	Memphis	TN	No	42	Yes	$28,410	$88,470	Adult	9	4	55.6%	50.6%	20.5%	80.0%	1.099	5	4
INOVA Fairfax Hospital	Fairfax	VA	No	38	Yes	$20,225	$46,650	Adult	5	3	60.0%	52.0%	8.6%	93.5%	1.154	3	2
VA Puget Sound Health Care System	Seattle	WA	Yes		Yes			Adult	26	3	46.2%	53.9%	35.7%	71.9%	0.857	12	14
Froedtert Memorial Lutheran Hosp. Can. Ctr.	Milwaukee	WI	No	452	Yes	$30,202	$30,202	Adult	38	2	29.0%	57.5%	42.3%	72.8%	0.504	11	27
City of Hope Banner	Phoenix	AZ	No	120	No	$40,685	$86,015	Both	64	5	43.6%	47.5%	36.0%	59.2%	0.918	28	36
Mayo Clinic AZ & Phoenix Children's Hospital	Scottsdale	AZ	No	102	No	$34,800	$98,360	Both	10	1	100.0%	67.7%	39.0%	95.3%	1.477	10	0
University Medical Center	Tucson	AZ	No	119	No	$75,762	$235,920	Both	64	5	37.5%	45.8%	34.2%	57.3%	0.819	24	40
City of Hope National Medical Center	Duarte	CA	No	494	No	$36,524	$115,031	Both	330	4	60.3%	50.5%	45.6%	55.8%	1.194	199	131
Stanford Hospital and Clinics	Stanford	CA	No	224	No			Both	184	1	62.4%	61.0%	54.4%	68.1%	1.023	115	69
UCSF Medical Center	San Francisco	CA	No	164	No	$96,969	$219,108	Both	116	2	65.0%	56.9%	48.4%	65.8%	1.142	75	41
University of California (UCLA)	Los Angeles	CA	No	144	No	$28,410	$88,470	Both	96	3	40.5%	53.7%	44.2%	63.1%	0.754	39	57
University of California-Davis	Sacramento	CA	No	43	No	$28,410	$88,470	Both	16	2	54.2%	56.1%	32.5%	79.7%	0.966	9	7
Indiana U. Bone Marrow/Stem Cell Transpl Prog.	Indianapolis	IN	No	198	No	$198,000	$198,000	Both	82	2	55.9%	57.3%	47.2%	67.6%	0.976	46	36
University of Kansas Medical Center	Kansas City	KS	No	129	No	$65,458	$89,061	Both	20	4	65.0%	48.9%	28.8%	69.1%	1.329	13	7
Mayo Clinic Rochester	Rochester	MN	No	329	No	$33,255	$103,225	Both	74	3	67.2%	54.1%	43.5%	65.1%	1.242	50	24
University of Minnesota Medical Center, Fairview	Minneapolis	MN	No	255	No	$100,346	$104,976	Both	142	1	67.9%	64.4%	57.1%	72.2%	1.054	96	46
Penn State Milton S. Hershey Medical Center	Hershey	PA	No	120	No	$85,145	$126,900	Both	82	3	48.8%	51.9%	41.9%	62.2%	0.940	40	42
M.D. Anderson Cancer Center	Houston	TX	No	887	No	$60,600	$112,282	Both	465	4	54.7%	51.1%	46.9%	55.6%	1.070	254	211
Medical City Dallas Hospital	Dallas	TX	No	77	No	$34,092	$106,164	Both	44	3	61.0%	51.9%	38.0%	66.3%	1.175	27	17
Texas Children's Hospital	Houston	TX	No	123	No	$28,410	$88,470	Both	174	2	60.7%	56.8%	49.9%	64.0%	1.069	106	68
Texas Tech University Health Sciences Center	Lubbock	TX	No	18	No	$28,410	$110,637	Both	6	4	50.0%	49.0%	11.3%	85.2%	1.020	3	3
Texas Transplant Institute	San Antonio	TX	No	45	No	$113,632	$120,150	Both	107	3	57.6%	53.9%	45.0%	62.9%	1.069	62	45

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Attachment A

BMT Transplant Centers by State

Transplant Center Name	City	State	BMT CON	# BMTs	CON State	Low Cost	High Cost	Peds/Adult	# Pts with Survial Data	Complex	Actual Survial %	Expected Survial %	Low Range	High Range	Index	Pts. Survived	Pts. Deceased
University of Utah	Salt Lake City	UT	No	143	No	$36,450	$110,590	Both	80	2	63.5%	57.6%	47.2%	67.9%	1.102	51	29
University of Alabama at Birmingham	Birmingham	AL	No	106	Yes	$105,175	$105,175	Both	67	1	56.4%	61.9%	51.1%	72.8%	0.911	38	29
Shands Hospital - University of Florida	Gainesville	FL	Yes	173	Yes	$59,401	$156,349	Both	107	3	56.0%	52.8%	44.0%	62.2%	1.061	60	47
University of Miami	Miami	FL	Yes	51	Yes	$28,440	$88,620	Both	13	5	38.5%	45.7%	19.9%	70.9%	0.842	5	8
Hawaii Medical Center	Honolulu	HI	No	15	Yes	$86,629	$115,154	Both	8	4	25.0%	50.9%	17.4%	83.7%	0.491	2	6
University of Iowa Hospitals and Clinics	Iowa City	IA	No	88	Yes	$71,340	$125,200	Both	64	4	42.2%	50.9%	39.6%	62.8%	0.829	27	37
Loyola University Medical Center	Maywood	IL	No	113	Yes	$36,095	$85,702	Both	126	5	48.0%	46.9%	38.6%	55.2%	1.023	60	66
Univ. of Illinois at Chicago (UIC) Med. Ctr.	Chicago	IL	No	48	Yes			Both	23	5	38.7%	47.3%	27.9%	66.3%	0.818	9	14
University of Chicago	Chicago	IL	No	140	Yes			Both	90	5	36.2%	42.2%	32.9%	52.1%	0.858	33	57
Univ. Medical Center, Inc., Univ. of Louisville Hosp.	Louisville	KY	Yes	46	Yes	$127,358	$169,808	Both	42	4	38.1%	50.3%	35.7%	65.1%	0.757	16	26
University of Kentucky Medical Center	Lexington	KY	Yes	55	Yes	$31,900	$47,780	Both	32	5	31.3%	46.6%	29.6%	63.8%	0.672	10	22
Dana Farber/Partners Cancer Care	Boston	MA	No	439	Yes	$51,297	$133,967	Both	334	2	67.1%	56.3%	51.4%	61.7%	1.192	224	110
Tufts Medical Center	Boston	MA	No	64	Yes	$28,410	$88,470	Both	58	5	46.3%	47.5%	35.5%	59.7%	0.975	27	31
Johns Hopkins University	Baltimore	MD	Yes	187	Yes			Both	70	2	51.4%	59.0%	47.9%	70.5%	0.871	36	34
National Institutes of Health	Bethesda	MD	Yes	72	Yes			Both									
University of Michigan Medical Center	Ann Arbor	MI	Yes	253	Yes	$119,248	$119,248	Both	229	4	47.5%	51.0%	45.0%	57.2%	0.931	109	120
Barnes-Jewish Hospital	St. Louis	MO	No	339	Yes	$31,249	$97,316	Both	280	3	53.8%	53.3%	48.2%	59.1%	1.009	151	129
Cardinal Glennon Children's Hospital	St. Louis	MO	No	1	Yes	$30,330	$90,676	Both	16	2	68.8%	56.8%	34.0%	79.5%	1.211	11	5
University of Mississippi Medical Center	Jackson	MS	No	52	Yes	$47,237	$120,791	Both	53	5	34.9%	47.3%	34.9%	60.1%	0.738	18	35
Duke University Medical Center	Durham	NC	Yes	230	Yes	$52,663	$60,653	Both	154	2	59.6%	56.7%	49.2%	64.7%	1.051	92	62
UNC Hospitals	Chapel Hill	NC	Yes	116	Yes	$64,449	$101,783	Both	58	3	53.5%	54.2%	42.0%	66.6%	0.987	31	27
Wake Forest University Baptist Medical Center	Winston-Salem	NC	Yes	85	Yes	$32,160	$32,160	Both	38	5	34.2%	41.5%	26.8%	56.5%	0.824	13	25
The Nebraska Medical Center	Omaha	NE	No	146	Yes	$36,305	$110,600	Both	106	2	55.5%	57.3%	48.5%	66.5%	0.969	59	47
Hackensack University Medical Center	Hackensack	NJ	No	324	Yes	$31,243	$97,316	Both	160	4	49.2%	49.8%	42.7%	57.3%	0.988	79	81
Memorial Sloan-Kettering Cancer Center	New York	NY	Yes	140	Yes	$33,119	$95,085	Both	228	3	63.9%	53.1%	47.2%	59.5%	1.203	146	82
Mount Sinai Hospital	New York	NY	Yes	119	Yes	$28,410	$88,470	Both	76	5	35.3%	47.8%	37.5%	58.5%	0.738	27	49
Roswell Park Cancer Institute	Buffalo	NY	Yes	100	Yes	$28,410	$88,470	Both	67	3	58.9%	53.6%	42.2%	65.3%	1.099	39	28
Strong Memorial Hospital	Rochester	NY	Yes	79	Yes	$28,565	$91,340	Both	79	5	45.4%	44.3%	34.3%	54.7%	1.025	36	43
Zalmen A. Arlin Cancer Institute	Hawthorne	NY	Yes	50	Yes	$42,617	$132,706	Both	32	3	40.4%	54.1%	38.0%	70.0%	0.747	13	19
Cleveland Clinic Foundation	Cleveland	OH	No	173	Yes	$42,612	$132,704	Both	123	3	48.6%	53.1%	45.0%	61.4%	0.915	60	63
University Hospitals Case Medical Center	Cleveland	OH	No	44	Yes	$91,755	$113,853	Both	35	1	56.4%	61.9%	46.3%	77.4%	0.911	20	15
OU Medical Center & The Children's Hospital	Oklahoma City	OK	No	70	Yes	$116,362	$116,362	Both	64	4	39.1%	52.0%	40.9%	63.6%	0.752	25	39
Oregon Health & Science University	Portland	OR	No	149	Yes	$48,462	$90,107	Both	182	3	50.5%	54.8%	48.0%	61.9%	0.922	92	90
Medical University of South Carolina	Charleston	SC	No	72	Yes	$28,410	$88,470	Both	37	4	43.2%	49.1%	33.8%	64.5%	0.880	16	21
St. Jude Children's Research Hospital	Memphis	TN	No	136	Yes	$28,410	$88,470	Both	89	1	66.2%	64.4%	55.0%	74.1%	1.028	59	30
Vanderbilt University Medical Center	Nashville	TN	No	225	Yes	$65,876	$67,785	Both	131	2	52.7%	58.5%	50.5%	66.8%	0.901	69	62
VCU Massey Cancer Center	Richmond	VA	No	120	Yes	$84,219	$85,693	Both	64	2	51.6%	58.1%	46.6%	70.0%	0.888	33	31
Seattle Cancer Care Alliance	Seattle	WA	Yes	410	Yes	$68,615	$138,800	Both	561	2	62.6%	56.0%	52.2%	60.1%	1.118	351	210
University of Wisconsin Hospital & Clinics	Madison	WI	No	107	Yes	$77,432	$197,634	Both	27	1	77.8%	59.4%	41.1%	77.2%	1.310	21	6
West Virginia University Hospitals, Inc.	Morgantown	WV	Yes	58	Yes	$42,154	$42,154	Both	44	2	52.3%	56.5%	42.7%	70.6%	0.926	23	21
Children's Hospital & Research Center Oakland	Oakland	CA	No	20	No	$28,410	$88,470	Peds	10	3	40.0%	53.5%	24.6%	83.2%	0.748	4	6
Children's Hospital of Los Angeles	Los Angeles	CA	No	64	No	$29,610	$89,870	Peds	43	1	76.6%	68.9%	55.7%	82.4%	1.112	33	10
Children's Hospital of Orange County (CHOC)	Orange	CA	No	32	No	$28,410	$88,470	Peds	45	2	44.4%	58.1%	44.7%	71.8%	0.764	20	25
Loma Linda University Medical Center	Loma Linda	CA	No	12	No	$35,860	$92,045	Peds	12	2	83.3%	55.5%	30.5%	79.5%	1.501	10	2
Rady Children's Hospital, San Diego	San Diego	CA	No	8	No	$37,325	$89,705	Peds	2	1	50.0%	68.6%	7.5%	100.0%	0.729	1	1
The Children's Hospital	Aurora	CO	No	185	No	$34,104	$104,718	Peds	4	2	25.0%	59.0%	11.4%	100.0%	0.424	1	3
Children's Hospital of Philadelphia	Philadelphia	PA	No		No			Peds	75	1	56.0%	63.1%	52.5%	73.7%	0.887	42	33
Children's Hospital of Pittsburgh	Pittsburgh	PA	No	24	No	$62,112	$105,037	Peds									
Children's Medical Center of Dallas	Dallas	TX	No	23	No	$138,249	$142,209	Peds	22	1	27.3%	59.6%	39.7%	79.2%	0.458	6	16
Cook Children's Medical Center	Fort Worth	TX	No		No			Peds	77	1	59.7%	59.4%	48.9%	70.3%	1.005	46	31
Children's National Medical Center	Washington	DC	No	29	Yes	30164	$91,221	Peds	26	1	55.1%	60.7%	42.8%	78.8%	0.908	14	12
All Children's Hospital	St. Petersburg	FL	Yes	29	Yes	$28,410	$88,470	Peds	24	1	41.7%	63.8%	45.0%	83.0%	0.654	10	14
Mayo Clinic Jacksonville (Pediatrics)	Jacksonville	FL	Yes	10	Yes	$47,777	$82,855	Peds									
Miami Children's Hospital	Miami	FL	Yes	14	Yes	$79,800	$79,800	Peds	20	2	65.0%	28.2%	37.5%	78.1%	2.305	13	7
Children's Healthcare of Atlanta at Egleston	Atlanta	GA	No	54	Yes	$35,740	$179,790	Peds	35	1	59.1%	62.5%	47.2%	78.3%	0.946	21	14
The Children's Memorial Medical Center	Chicago	IL	No	64	Yes			Peds	40	1	50.0%	60.7%	46.6%	75.1%	0.824	20	20
Children's Hospital/LSUHSC	New Orleans	LA	No	14	Yes	$39,774	$123,858	Peds	7	3	57.1%	53.5%	19.7%	87.0%	1.067	4	3
Children's Hospital of Michigan	Detroit	MI	Yes	22	Yes	$56,350	$174,570	Peds									
Helen DeVos Children's Hospital	Grand Rapids	MI	Yes	15	Yes	$39,774	$123,858	Peds	18	1	77.8%	66.3%	45.7%	87.7%	1.173	14	4
The Children's Mercy Hospital	Kansas City	MO	No	22	Yes	$55,556	$58,423	Peds									
Schneider Children's Hospital	New Hyde Park	NY	Yes	24	Yes	$28,410	$88,470	Peds	21	1	56.7%	62.1%	42.9%	81.7%	0.913	12	9
The Children's Hospital of New York	New York	NY	Yes	43	Yes	$60,125	$101,280	Peds	23	2	52.2%	54.8%	35.2%	75.0%	0.953	12	11
Cincinnati Children's Hospital Medical Center	Cincinnati	OH	No	80	Yes	$34,092	$106,164	Peds	125	1	68.4%	70.1%	62.5%	78.2%	0.976	86	40

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Attachment A

BMT Transplant Centers by State

Transplant Center Name	City	State	BMT CON	# BMTs	CON State	Low Cost	High Cost	Peds/Adult	# Pts with Survial Data	Complex	Actual Survial %	Expected Survial %	Low Range	High Range	Index	Pts. Survived	Pts. Deceased
Nationwide Children's Hospital	Columbus	OH	No	32	Yes	$36,936	$115,012	Peds	15	1	66.7%	68.9%	46.1%	91.8%	0.968	10	5
Children's Hospital of Wisconsin	Milwaukee	WI	No	43	Yes	$68,330	$181,801	Peds	51	1	62.5%	64.6%	51.8%	77.3%	0.967	32	19

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Attachment A

Programs Per Million by State

Table 1: Annual Estimates of the Resident Population for the United States							
Geographic Area	Abbr.	BMT Programs	BMTS	BMT CON	CON	Population Estimates July 1, 2008	Pgm/ Million
United States						304,059,724	
Alabama	AL	1	106	No	Yes	4,661,900	0.21
Alaska	AK	0	0	No	Yes	686,293	0.00
Arizona	AZ	3	341	No	No	6,500,180	0.46
Arkansas	AR	1	770	No	Yes	2,855,390	0.35
California	CA	13	1205	No	No	36,756,666	0.35
Colorado	CO	3	185	No	No	4,939,456	0.61
Connecticut	CT	1	123	No	Yes	3,501,252	0.29
Delaware	DE	1	28	No	Yes	873,092	1.15
District of Columbia	DC	2	29	No	Yes	591,833	3.38
Florida	FL	7	552	Yes	Yes	18,328,340	0.38
Georgia	GA	3	361	No	Yes	9,685,744	0.31
Hawaii	HI	1	15	No	Yes	1,288,198	0.78
Idaho	ID	0	0	No	No	1,523,816	0.00
Illinois	IL	6	704	No	Yes	12,901,563	0.47
Indiana	IN	2	198	No	No	6,376,792	0.31
Iowa	IA	1	88	No	Yes	3,002,555	0.33
Kansas	KS	1	129	No	No	2,802,134	0.36
Kentucky	KY	2	101	Yes	Yes	4,269,245	0.47
Louisiana	LA	2	38	No	Yes	4,410,796	0.45
Maine	ME	0	0	No	Yes	1,316,456	0.00
Maryland	MD	3	363	Yes	Yes	5,633,597	0.53
Massachusetts	MA	5	661	No	Yes	6,497,967	0.77
Michigan	MI	5	552	Yes	Yes	10,003,422	0.50
Minnesota	MN	2	584	No	No	5,220,393	0.38
Mississippi	MS	1	52	No	Yes	2,938,618	0.34
Missouri	MO	5	385	No	Yes	5,911,605	0.85
Montana	MT	0	0	No	Yes	967,440	0.00
Nebraska	NE	1	146	No	Yes	1,783,432	0.56
Nevada	NV	0	0	No	Yes	2,600,167	0.00
New Hampshire	NH	1	41	No	Yes	1,315,809	0.76
New Jersey	MJ	2	0	No	Yes	8,682,661	0.23
New Mexico	NM	0	0	No	No	1,984,356	0.00
New York	NY	10	794	Yes	Yes	19,490,297	0.51
North Carolina	NC	3	431	Yes	Yes	9,222,414	0.33
North Dakota	ND	0	0	No	No	641,481	0.00
Ohio	OH	6	584	No	Yes	11,485,910	0.52
Oklahoma	OK	1	70	No	Yes	3,642,361	0.27
Oregon	OR	1	149	No	Yes	3,790,060	0.26
Pennsylvania	PA	9	144	No	No	12,448,279	0.72
Rhode Island	RI	1	14	Yes	Yes	1,050,788	0.95
South Carolina	SC	1	72	No	Yes	4,479,800	0.22
South Dakota	SD	1	0	No	No	804,194	1.24
Tennessee	TB	3	0	No	Yes	6,214,888	0.48
Texas	TX	9	1173	No	No	24,326,974	0.37
Utah	UT	2	143	No	No	2,736,424	0.73
Vermont	VT	0	0	No	Yes	621,270	0.00
Virginia	VA	2	120	No	Yes	7,769,089	0.26
Washington	WA	2	410	Yes	Yes	6,549,224	0.31
West Virginia	WV	1	58	Yes	Yes	1,814,468	0.55
Wisconsin	WI	3	150	No	Yes	5,627,967	0.53
Wyoming	WY	0	0	No	No	532,668	0.00
Census Bureau							
Release Date: December 22, 2008							

Attachment A

Summary Information

Total	BMT CON States	Non BMT CON States	MI
Number of BMTs performed[1]	3275	11261	552
Number of Programs	34	94	5
Avg BMT per facility[1]	99.2	128.0	110.4
Avg Low Search Cost[1]	$46,482	$52,547	$60,946
Avg High Search Cost[1]	$94,179	$102,935	$126,529
Difference in range[1]	$47,697	$50,388	$65,584
Programs/ Million Population[1]	0.45	0.42	0.50
BMT/ Million Population[1]	41	46	55.18
1 Year Survival %[2]	53.4%	54.3%	48.2%
Weighted Total Complexity	7087	19106	1607
Weighted Average Complexity[2]	2.98	2.96	3.56
Average Weighted Index[2]	1.01	1.00	0.93

* National Marrow Donor Program Data
**The costs listed are a small part of the total cost of a transplant. They are only the costs specific to the donor search and services that occur before
***Michigan is a subset of CON State Totals
[1]www.NMDP.org June 2007- May 2008
[2]www.NMDP.org Jan 2002-December 2006

Peds	BMT CON States	Non BMT CON States	MI
Number of BMTs performed[1]	157	706	37
Number of Programs	7	18	2
Avg BMT per facility[1]	17.4	64.2	18.5
Avg Low Search Cost[1]	$48,664	$46,311	$48,062
Avg High Search Cost[1]	$105,615	$110,453	$149,214
Difference in range[1]	$56,951	$64,141	$101,152
Programs/ Million Population[1]	N/A	N/A	N/A
1 Year Survival %[2]	58.1%	59.4%	66.3%
Weighted Total Complexity	149	684	18
Weighted Average Complexity[2]	1.41	1.16	1.00
Average Weighted Index[2]	1.17	0.93	1.17

* National Marrow Donor Program Data
of the total cost of a transplant.
They are only the costs specific to
***Michigan is a subset of CON State Totals
[1]www.NMDP.org June 2007- May 2008
[2]www.NMDP.org Jan 2002-December 2006

Adults	BMT CON States	Non BMT CON States	MI
Number of BMTs performed[1]	894	3850	262
Number of Programs	10	35	2
Avg BMT per facility[1]	99.8	120.3	131.0
Avg Low Search Cost[1]	$33,288	$45,686	$28,410
Avg High Search Cost[1]	$79,081	$83,012	$88,440
Difference in range[1]	$45,794	$37,326	$60,030
Programs/ Million Population[1]	N/A	N/A	N/A
1 Year Survival %[2]	45.3%	49.8%	48.9%
Weighted Total Complexity	1530	5660	673
Weighted Average Complexity[2]	3.45	3.61	3.28
Average Weighted Index[2]	0.89	0.97	0.91

* National Marrow Donor Program Data
**The costs listed are a small part of the total cost of a transplant. They are only the costs specific to the donor search and services that occur before
***Michigan is a subset of CON State Totals
[1]www.NMDP.org June 2007- May 2008
[2]www.NMDP.org Jan 2002-December 2006

Both	BMT CON States	Non BMT CON States	MI
Number of BMTs performed[1]	2224	6705	253
Number of Programs	17	41	1
Avg BMT per facility[1]	130.8	163.5	253.0
Avg Low Search Cost[1]	$52,501	$59,584	$119,248
Avg High Search Cost[1]	$96,895	$114,560	$119,248
Difference in range[1]	$44,394	$54,975	$0
Programs/ Million Population[1]	N/A	N/A	N/A
1 Year Survival %[2]	57.6%	54.2%	40.5%
Weighted Total Complexity	5408	12762	916
Weighted Average Complexity[2]	2.96	2.97	4.00
Average Weighted Index[2]	1.03	1.02	0.93

* National Marrow Donor Program Data
**The costs listed are a small part of the total cost of a transplant. They are only the costs specific to the donor search and services that occur before
***Michigan is a subset of CON State Totals
[1]www.NMDP.org June 2007- May 2008
[2]www.NMDP.org Jan 2002-December 2006

Attachment B

Attachment B

SPECTRUM HEALTH

Need for Bone Marrow Transplant Services in Western Michigan

Richard Funnell, MHA, FACHE, CMPE
July 8, 2009

Attachment B

SPECTRUM HEALTH

Charge of Bone Marrow Transplant (BMT) SAC

Look at statewide access issues, with particular reference to access outside southeast Michigan.

SPECTRUM HEALTH

Spectrum Health Position

CON Review Standards should be revised to allow access to adult BMT services in western Michigan.

SPECTRUM HEALTH

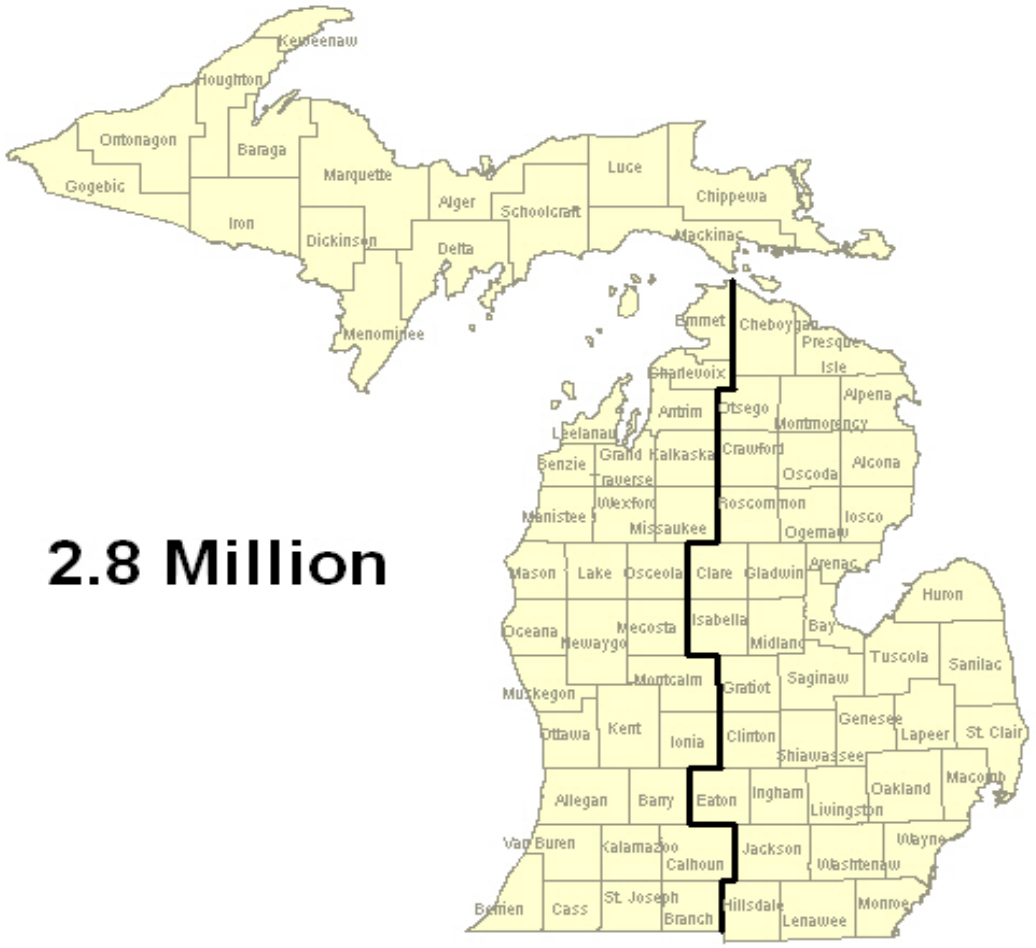
Why Revise CON Standards?

- Access
- Continuity of Care (Pre, During, and Post Transplant)
- Hardship for Patient and Family
- Financial Cost to Insurers and Employers
- Existing Infrastructure
- Continued Programmatic Growth

Attachment B

SPECTRUM HEALTH

Michigan State's Population Distribution



2.8 Million

7.1 Million

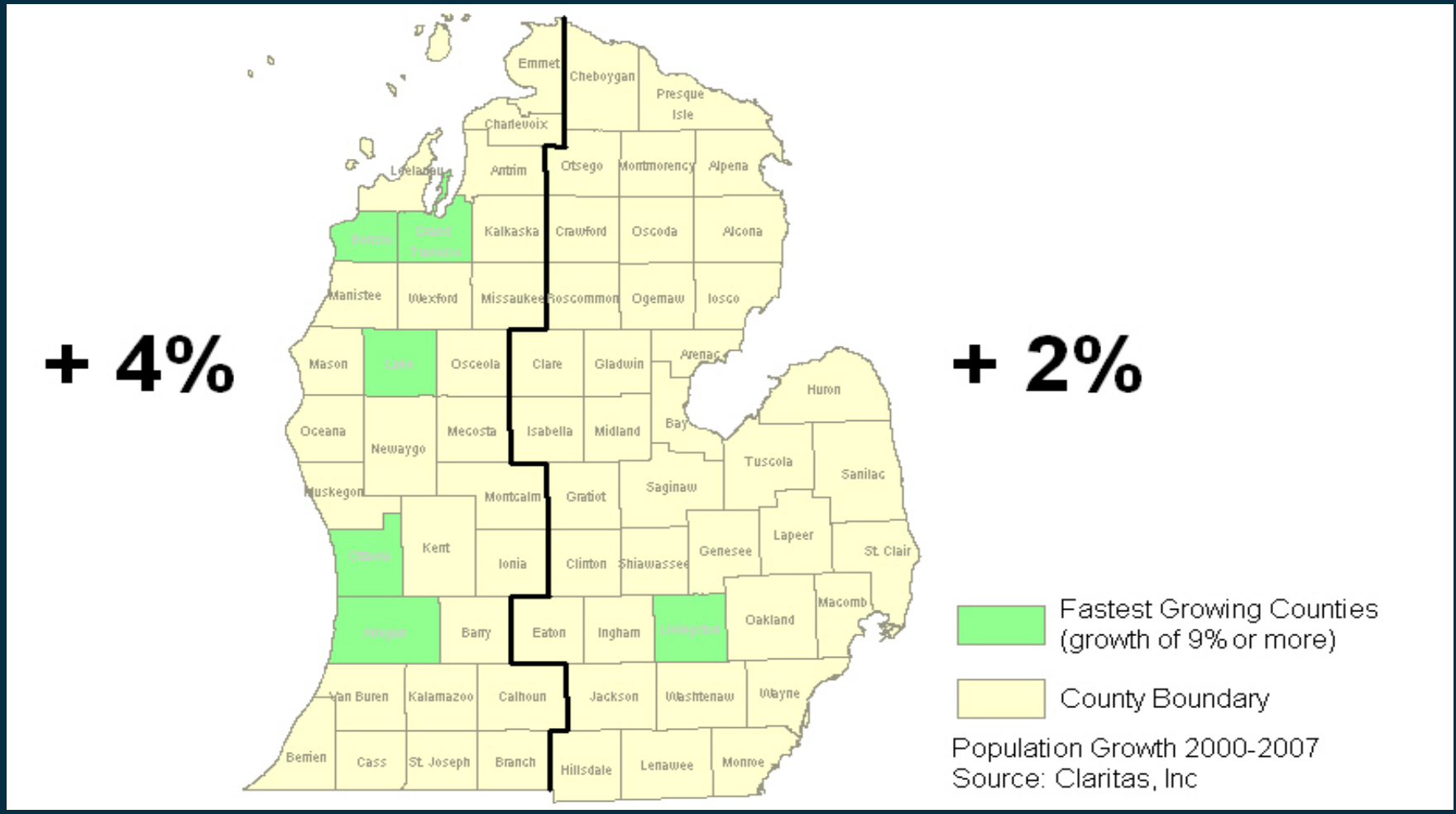
County Boundary

Population 2000
Source: Claritas, Inc

Attachment B

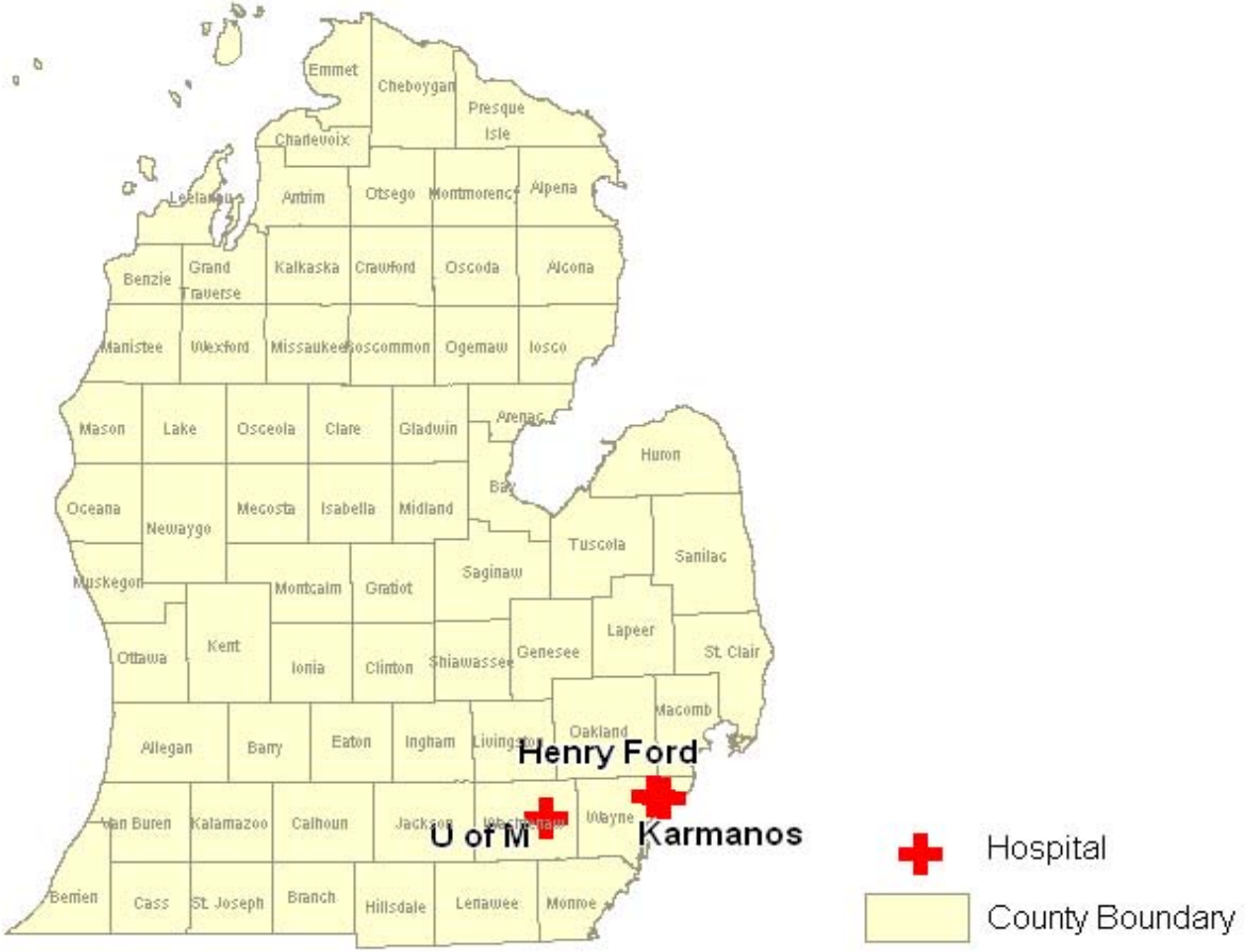
SPECTRUM HEALTH

Western Michigan Population Growth



SPECTRUM HEALTH

Existing Adult BMT Programs in Michigan

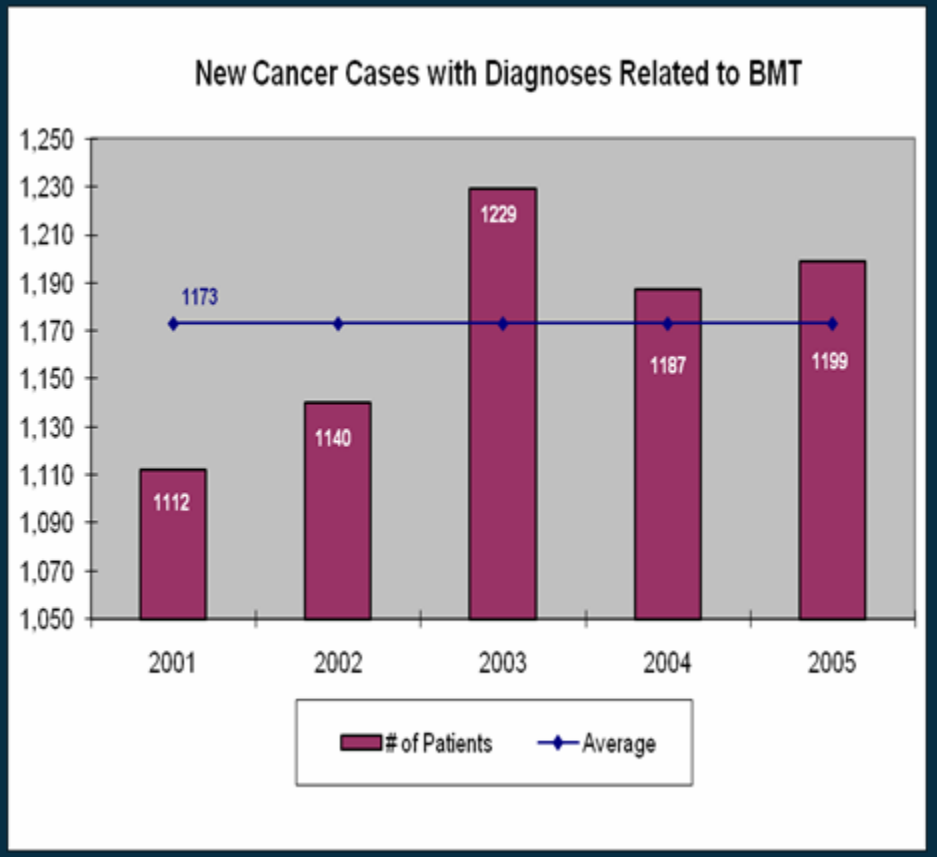


SPECTRUM HEALTH

Western Michigan Cancer Cases and BMT Patient Discharges

Diagnosis of:

- Acute Myelogenous Leukemia
- Acute Lymphoblastic Leukemia
- Chronic Myelogenous Leukemia
- Hodgkin's Myeloma
- Myelodysplastic Syndrome
- Non-Hodgkin's Lymphoma



Source: Michigan Resident Cancer Incidence File; processed by the Michigan Department of Community Health, Vital Records and Health Data Development Section by November 26, 2007.

Attachment B

SPECTRUM HEALTH

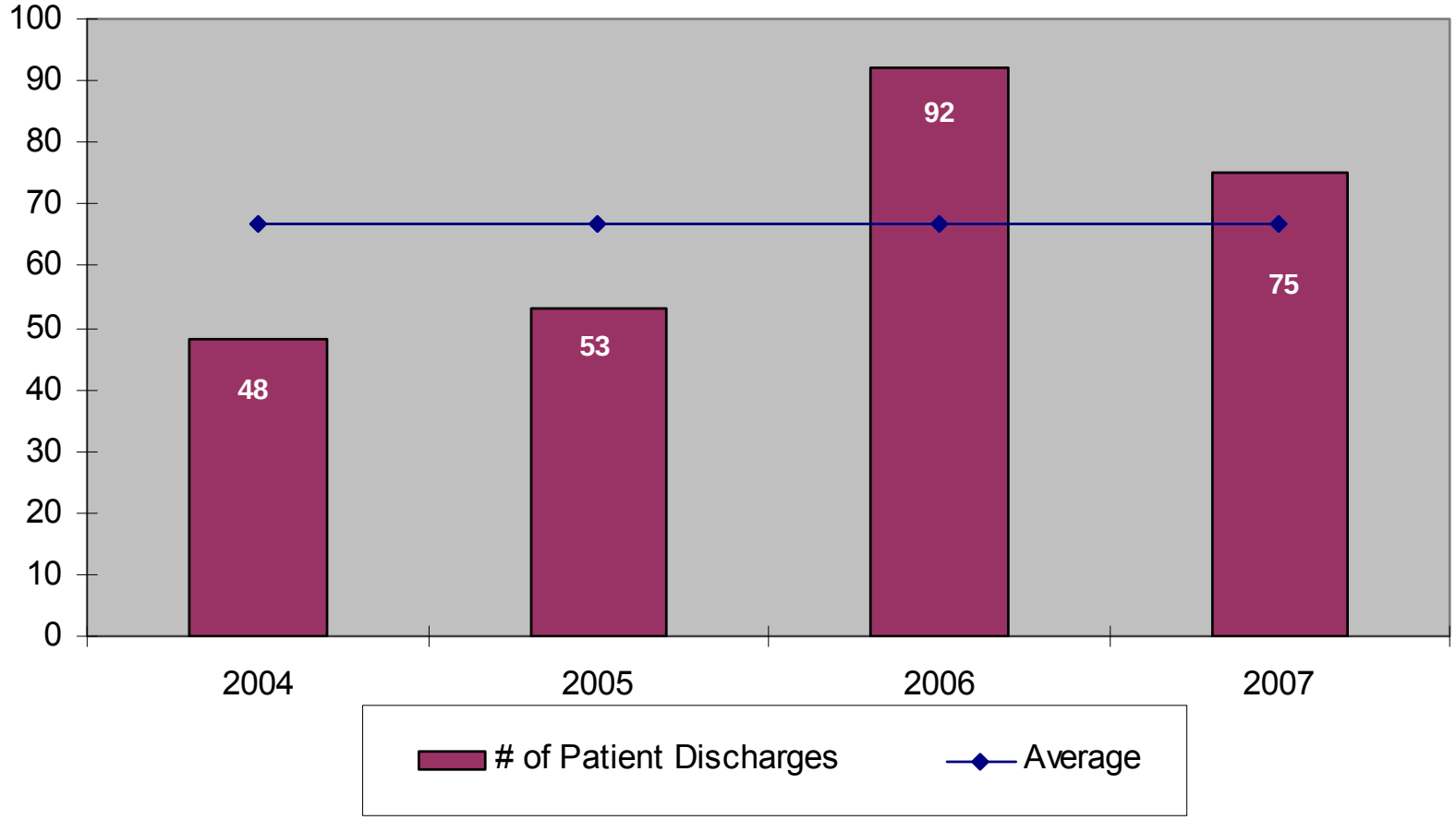
Western Michigan Cancer Patients Needing BMT

Diagnosis	Total Patients in W. Mi., 2005	Estimated Needing BMT Pct*	Patients
AML	91	24%	22
Myelodysplastic Syndrome	75	50%	38
Acute Lymphoblastic Leukemia	6	25%	2
Non-Hodgkins Lymphoma (lg cell)	650	8%	52
Multiple Myeloma	139	28%	39
Hodgkins Disease	82	14%	11
Chronic Leukemia	156	32%	50
Total	1,199	18%	213

* Based on experience of a nationally recognized cancer center.

SPECTRUM HEALTH

Western Michigan BMT Patient Discharges



Source: MIDB; fiscal years (July-June)

SPECTRUM HEALTH

Continuity of Care

Physician Relationships

- PCP
- Oncologist
- Transplanter

Knowledge of Patient's

- Disease
- Psycho-social needs
- Co-morbidities

Management of post transplant complications

- Graft vs Host Disease
- Recurrence

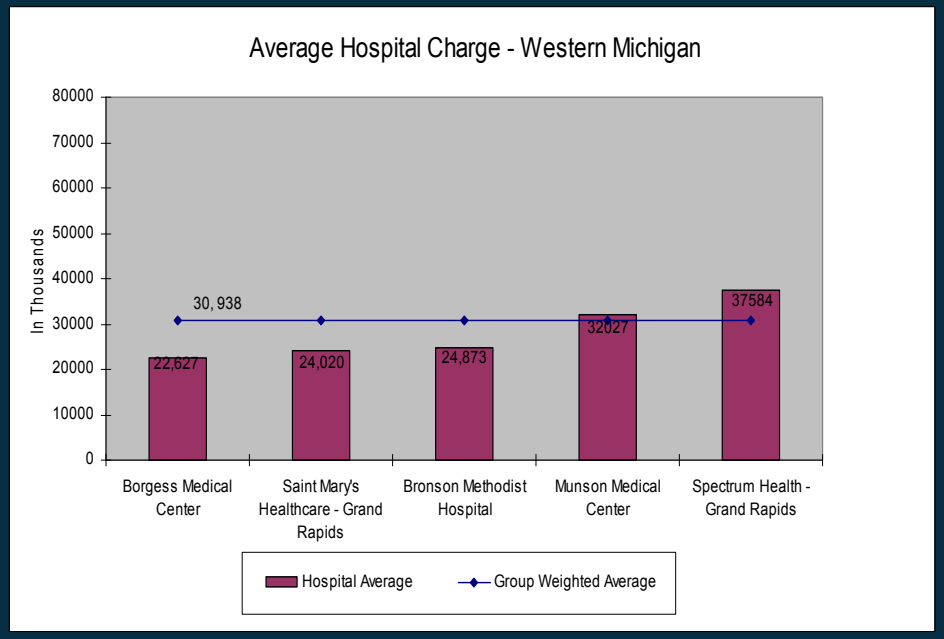
SPECTRUM HEALTH

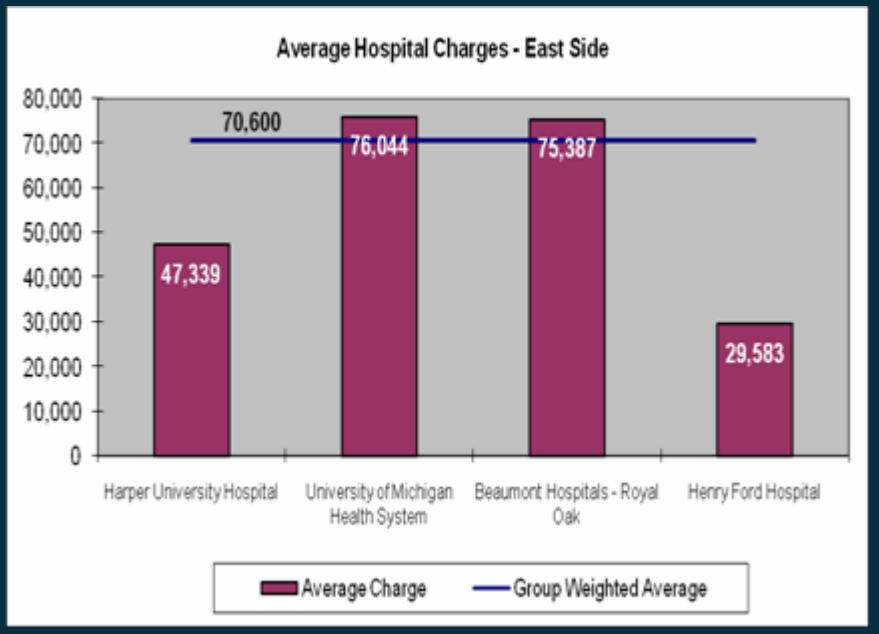
Patient Hardship

- Average length of stay for BMT is between 21 - 27 days
- Patients and families must uproot their lives
- Travel 2.5 - 3+ hours for treatment
- Exorbitant physical and monetary cost
- Follow-up treatment with transplant physician is almost non-existent

SPECTRUM HEALTH

Average Hospital Charges for Lymphoma & Leukemia Patients





Source: MedPar, 2007.

SPECTRUM HEALTH

Capitalizing on Current Western MI Infrastructure to Control Incremental Cost

Radiation Oncology Capabilities

Advanced Technology Labs

- Flow cytometry
- Cytogenetics
- Engraftment analysis

Michigan Community Blood Center

- Stem cell laboratory
- Cyropreservation and storage
- T-cell depletion

10 inpatient rooms equipped for BMT

SPECTRUM HEALTH

Capitalizing on Current Western MI Infrastructure to Control Incremental Cost

VARI / TGEN
- Phase I

Viracor Laboratory
- Viral testing

HLA Testing Capabilities

Two Regionally Located Hospitality Houses
- Renucci Hospitality House
- American Cancer Societies – Hope Lodge

Gilda's Club

SPECTRUM HEALTH

Capitalizing on Current Western MI Infrastructure to Control Incremental Cost

Pediatric BMT & hematopoietic cell transplantation program

Pediatric & Adult Trained Transplant Physician specializing in:

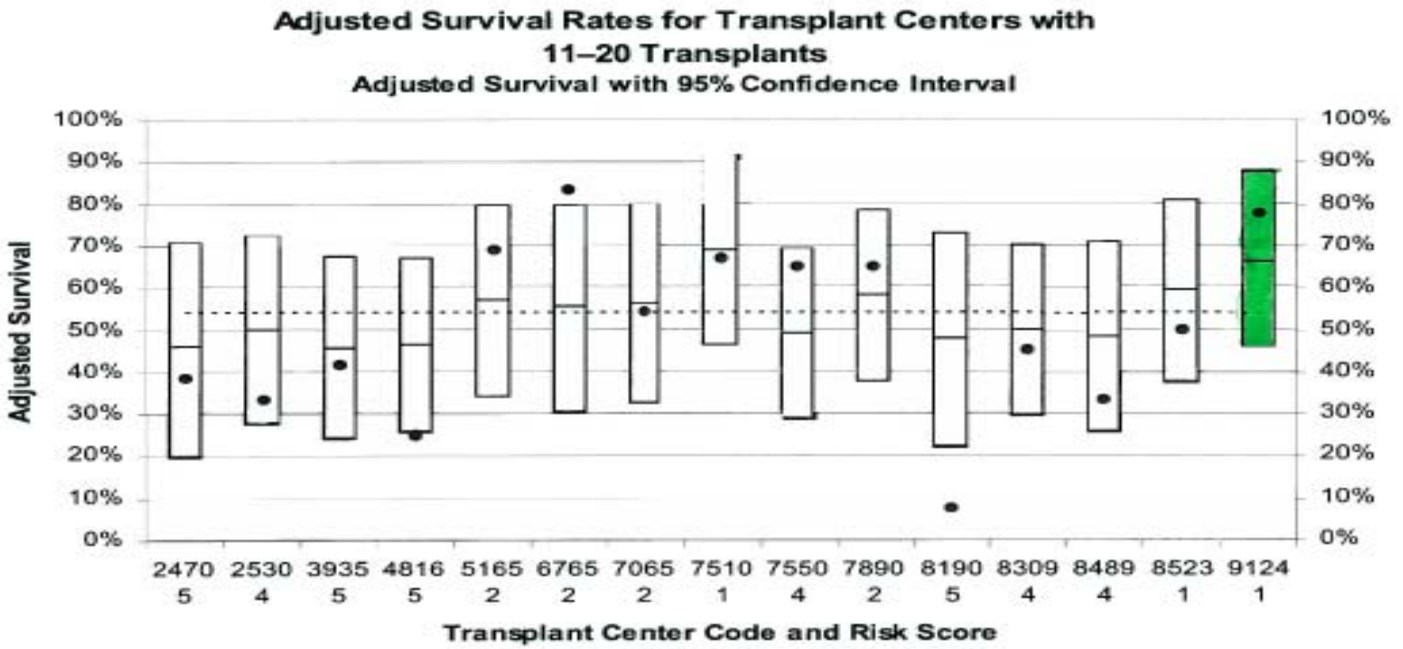
- Collection of peripheral blood cells
- Stem cell graft

Second Pediatric Transplanter will start Fall 2009

SPECTRUM HEALTH

Quality of Existing Pediatric BMT Program

Figure 2b: Center-Specific Results

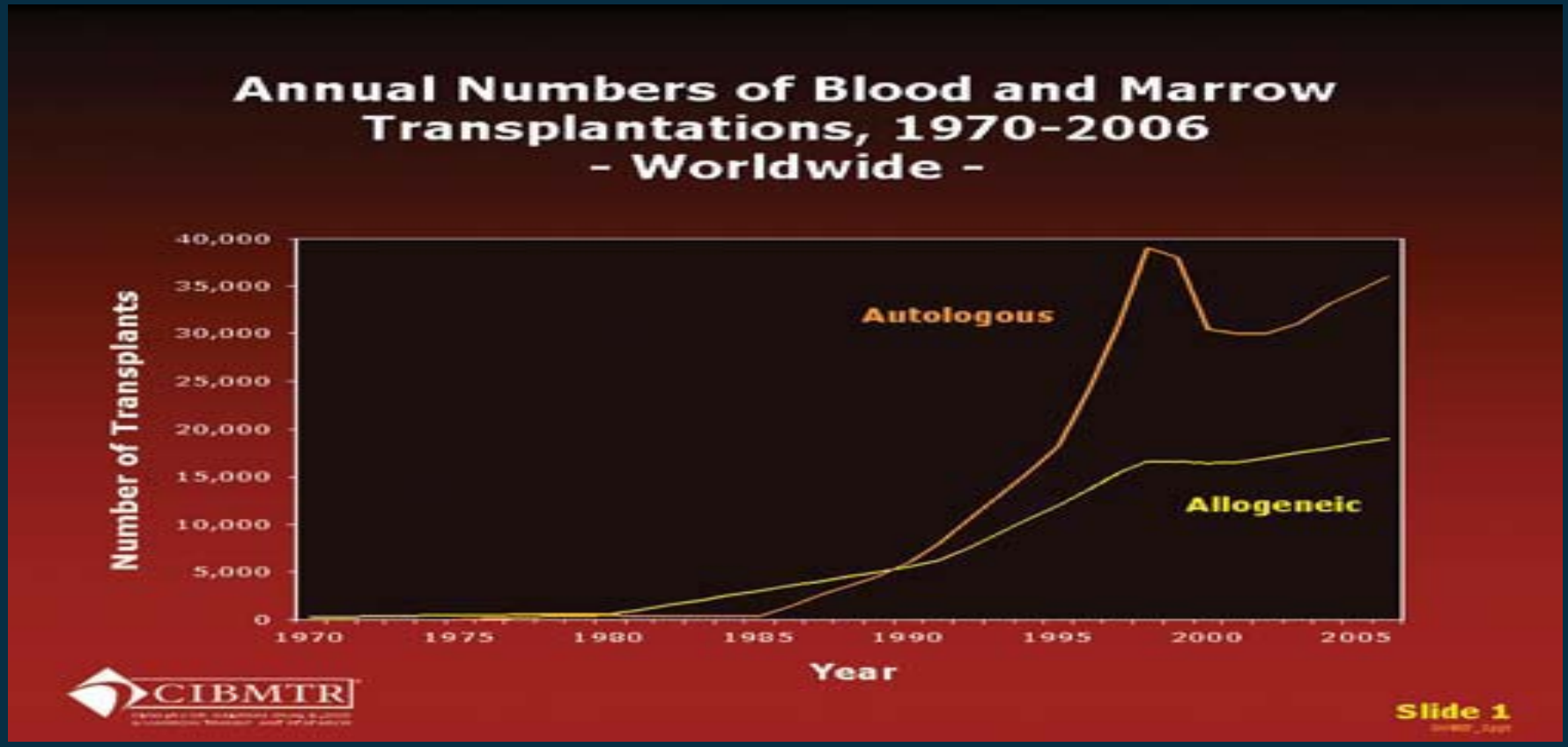


Dashed line indicates overall network survival rate of 53.9%.
A dot below (above) the box indicates an under (over)-performing center relative to the network.

28

SPECTRUM HEALTH

Growth Trends of BMT



Centers for International Blood and Marrow Transplant Research
December, 2007

SPECTRUM HEALTH

Continued Growth in Programmatic Projection

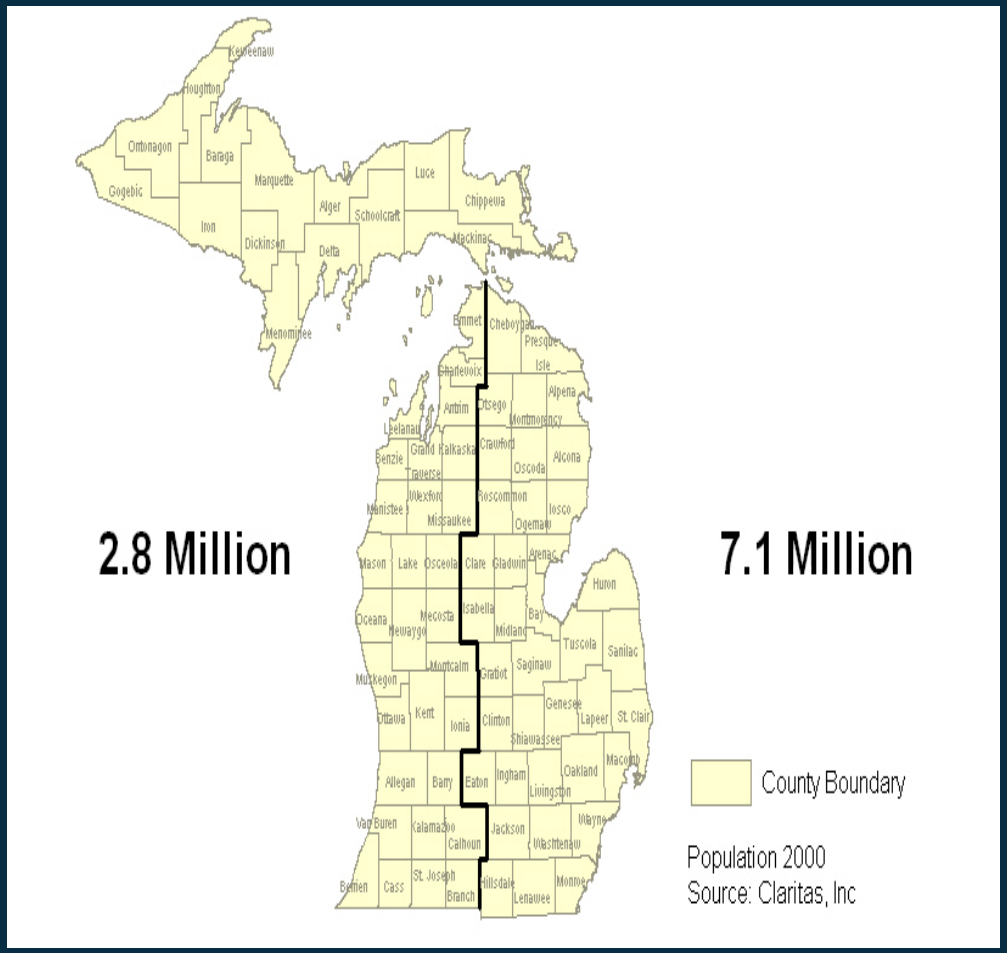
In 2007, the National Marrow Donor Program (NMDP) realized an 18% increase in transplants it facilitated.

NMDP 12/01/2008

SPECTRUM HEALTH

Proposed CON Solution

- Divide Michigan into two (2) planning areas – east & west
- Use planning area definitions currently in place for pediatric BMT
- Require at least one (1) BMT program in Western Michigan



Attachment B

Attachment C

Challenges of Running "Small" BMT Programs

Dr. N. Janakiraman, M.D.
Director of BMT program – Henry Ford Health System

History of HFHS BMT Program

- Autologous BMT 1989
- Autologous peripheral blood stem cell 1991
- Allogeneic (related) 1995
- Allogeneic (unrelated) 1999
- First Cord blood transplant 2000
- FACT Accreditation 3/2006
- ***F***oundation for the ***A***ccreditation of ***C***ellular ***T***herapy

Attachment C

Transplant Numbers and Landscape

- HFHS performs 40 – 50/year. The numbers have been steady over the last 6 years

- Decreasing Indications
  a. Breast cancer
  b. CML
  c. Constantly challenged by newer treatment options

- Contracts with insurance companies volume dependent

- Other 2 programs are “University” programs that are better funded and advertised more.

Attachment C

Facility

1. 20 bed HEPA filtered rooms – not fully utilized
2. Separate out patient wing with restricted access
3. Pheresis unit
4. Blood Bank support
5. ICU bed access

Attachment C

Primary Staffing FTE's

- M.D. Staff – 2
- Coordinators – 2
- Lab tech – 1
- Data manager – 1
- Nurse Practitioners – 2
- Social Worker – 1
- Pharmacy – 1
- IPD Nursing 4:1 → 1:1
- Insurance coordinator 0.2
- Quality manager 0.4
- Evening & weekend coverage by moonlighting fellows

Attachment C

Staffing Challenges

1. Orientation and training - cannot find trained personnel
2. Maintaining competencies of staff
3. Staff turnover
4. Lot of cross training/multi tasking
5. Changing with technology changes
6. Frequent updates & education

Reporting Challenges

1. CON Commission
2. FDA Register – be prepared for surprise inspections
3. Submit data on ALL consecutive patients (800 +points) to CIBMTR – now Govt. mandate
4. Submit data to ASBMT, insurance companies
5. FACT

Foundation for the **A**ccreditation of **C**ellular **T**herapy - FACT -

1. Voluntary 144/300 programs in U.S. are accredited
2. All payers require it
3. Inspected for: Clinical program, Collection facility & Processing, Cell manipulation if performed
4. Rigorous process – facility, SOP, Quality plan
5. Preparation takes > 6 months
6. 1.5 FTE working on it
7. Examples:

Attachment C

Other Challenges

1. Physician shortage – difficult to find a BMT physician with current experience
2. All 3 centers need trained BMT physicians
3. Recruiting to Michigan is a challenge
4. It is considered an academic position all candidates who declined to join and those who left (except for one) joined a University program
5. The same physician cannot combine private practice challenges or other oncology care and BMT speciality

Cost
Is it an issue?

- Building a new facility IPD/OPD
  need for ICU & support services
- Staffing as above
- Accreditation costs
- It is easier to fill up the plane than recruit newer planes for every 10-20 passengers. The operating costs will be about the same

Continuity of Care
BMT is a Specialty Care

1. Cancer patients are used to change of M.D.'s
2. Internist to Oncologist
3. Oncologist to BMT physician – even if they are both in the same facility
4. Impossible to be general Oncologist and BMT physician
5. I haven't had a single patient complain about the change or even travel. They just want quality care.

Attachment C

Would like to Remind you….
That I am old…..

1. St. Mary's in Grand Rapids held the CON for > 3 years in mid 90's.
   Could not start & CON lapsed

1. Oakwood Hospital, Dearborn decided a few years ago that all these efforts were not worth while.

Attachment C

Summary

1. BMT is a specialty care that should be provided in centers that are willing and able to provide the resources needed and meet ongoing demands

2. There are rigorous requirements for facility staffing and quality that need to be fulfilled whether you perform 40 or 200 transplants

3. Cost and efforts of maintaining such a program are the same whether you do 40 or 200 transplants. If we really need to keep the cost down, fill up the planes

4. Physician recruitment and retention is a major issue for the non university programs