

**MICHIGAN DEPARTMENT OF HEALTH AND HUMAN SERVICES (MDHHS)
MEGAVOLTAGE RADIATION THERAPY SERVICES/UNITS
STANDARD ADVISORY COMMITTEE (MRTSAC) MEETING**

Thursday, July 26, 2018

South Grand Building
333 S. Grand Ave,
1st Floor, Grand Conference Room
Lansing, MI 48933

APPROVED MINUTES

I. Call to Order

Chairperson Kastner called the meeting to order at 9:30 A.M.

A. Members Present:

Brian Kastner, MD, Chairperson – Spectrum Health
Ahmed Akl, MD – Genesee County Radiation Oncology PC (arrived at
9:36 a.m.)
Paul J Chuba MD, Ph.D. – St John Providence Health Systems
Michele L. Davis – Electrical Workers' Insurance Fund
Lucan DiCarlo, DO – Sparrow Hospital
Roberta Elliott – Spectrum Health's Cancer Health & Executive Patient
and Family Advisory Councils (PFAC)
Courtney Friedle – MidMichigan Health
James A. Hayman, MD – University of Michigan Health System
Gwendolyn H. Parker, MD – Blue Cross Blue Shield of Michigan
Walter M. Sahijdak, – MD Trinity Health-Michigan
Salim M Siddiqui, MD, Ph.D. – Henry Ford Health System
Anita A. Stolaruk – ProMedica Monroe Regional Hospital

B. Members Absent:

June Chan, MD – Michigan Radiological Society
Adeeb Harb – Detroit Medical Center

C. Michigan Department of Health and Human Services Staff present:

Tulika Bhattacharya
Beth Nagel
Tania Rodriguez
Brenda Rogers

II. Declaration of Conflicts of Interests

None.

III. Review of Agenda

Motion by Dr. DiCarlo, seconded by Dr. Siddiqui to accept the agenda as presented. Motion Carried.

IV. Review of Draft Minutes – June 28, 2018

Motion by Dr. Siddiqui, seconded by Dr. Chuba to accept the minutes as presented. Motion Carried.

V. Overview of CON Review Standards, Survey Data & Compliance

Ms. Bhattacharya provided an overview (Attachment A).

Discussion followed.

The Department will provide a breakdown by year of the different review standards and volume requirements.

VI. Review of Weights and Volumes from Various Institutions

Dr. Siddiqui provided an overview (Attachment B).

Discussion followed.

VII. Re-Evaluating ETV Thresholds

Dr. Chuba provided an overview (Attachment C).

Discussion followed.

Recessed at 10:48 a.m. and reconvened at 10:58 a.m.

VIII. Tabled Motion from June 28, 2018 Meeting

Dr. Kastner provided a summary.

Motion by Dr. Siddiqui, seconded by Dr. Parker to remove from the table the motion to increase non-special visit weight for complex to 2.5 and non-special visit weight for IMRT to 3.0 based on room time and the work product required. Motion carried in a vote of 12 - Yes, 0 - No, and 0 - Abstained.

Motion by Dr. Siddiqui, seconded by Dr. Sahjidak to amend Dr. Chuba's original motion to include studying the impact of Dr. Siddiqui's proposed numbers (Attachment D) as well as the originally proposed weights of 3.0 for non-special visit weight for complex and 2.5 for non-special visit weight for IMRT. Motion carried in a vote of 12 - Yes, 0 - No, and 0 - Abstained.

Motion by Dr. Chuba, seconded by Ms. Stolaruk to amend the amended motion to use only Dr. Siddiqui's proposed numbers. Motion carried in a vote of 12 - Yes, 0 - No, and 0 - Abstained.

Dr. Siddiqui will run the analysis.

IX. Next Steps

The Department will provide a breakdown by year of the different review standards and volume requirements.

The Department will provide the necessary data to Dr. Siddiqui to run the analysis.

X. Future Meeting Dates – August 30, 2018; October 3, 2018; November 1, 2018; November 29, 2018, & December 19, 2018

Chairperson Kastner reviewed the meeting schedule.

XI. Public Comment

None.

XII. Adjournment

Motion by Dr. Siddiqui, seconded by Dr. DiCarlo to adjourn the meeting at 11:31 a.m.

Megavoltage Radiation Therapy (MRT) Standard Advisory Committee

Overview of CON Standards, Survey Data & Compliance
Tulika Bhattacharya
CON Evaluation Section

MRT Services / Units

- ▶ "Megavoltage radiation therapy" or "MRT" means a clinical modality in which patients with cancer, other neoplasms, or cerebrovascular system abnormalities are treated with radiation which is delivered by a MRT unit.
- ▶ "MRT unit" or "unit" means a CON approved linear accelerator; cobalt unit; or other piece of medical equipment operating at an energy level equal to or greater than 1.0 million electron volts (megavolts or MEV) for the purpose of delivering doses of radiation to patients with cancer, other neoplasms, or cerebrovascular system abnormalities.
- ▶ "Non-special MRT unit" or "non-special unit" means an MRT unit other than an MRT unit meeting the definition of a special purpose MRT unit or an HMRT unit.
- ▶ "High MRT unit" or "HMRT unit" means a heavy particle accelerator or any other MRT unit operating at an energy level equal to or greater than 30.0 million electron volts (megavolts or MEV).

MRT Services / Units

- ▶ "Special purpose MRT unit" or "special purpose unit" or "special unit" means any of the following types of MRT units: (i) dedicated stereotactic radiosurgery unit [previously called Gamma & Cyber knife], (ii) dedicated total body irradiator (TBI), or (iii) an OR-based IORT unit.
 - ▶ "Cyber knife" means a treatment device that is a frameless special stereotactic radiosurgery unit that consists of three key components: (i) an advanced, lightweight linear accelerator (linac) (this device is used to produce a high energy megavoltage of radiation), (ii) a robot which can point the linear accelerator from a wide variety of angles, and (iii) several x-ray cameras (imaging devices) that are combined with software to track patient position. The cameras obtain frequent pictures of the patient during treatment and use this information to target the radiation beam emitted by the linear accelerator.
- ** An applicant proposing to initiate a special purpose unit must currently operate a non-special MRT unit(s).

Types of MRT Visits

Visit Category	Non-Special Visit Wt.	Special Visit Wt.
Simple	1.00	–
Intermediate	1.10	–
Complex	1.25	–
IMRT	2.00	–
Total Body Irradiation	8.00	8.00
HMRT Therapy	–	5.00
Stereotactic Radiosurgery/Radio-therapy *	8.00	8.00
IORT	–	20.00

*After 1st isocenter, each addl isocenter gets 6 ETVs; max 5 visits per course of therapy

** All patients under 5 years of age receive a 2.00 additive factor

Types of MRT Visits

- ▶ “Simple treatment visit” means a treatment visit involving a single treatment site, single treatment field, or parallel opposed fields with the use of no more than simple blocks.
- ▶ “Intermediate treatment visit” means a treatment visit involving two separate treatment sites, three or more fields to a single treatment site, or the use of special blocking.
- ▶ “Complex treatment visit” means a treatment visit involving three or more treatment sites, tangential fields with wedges, rotational or arc techniques or other special arrangements, or custom blocking.

Types of MRT Visits

- ▶ "IMRT treatment visit" means a visit utilizing only the computer controlled multi-leaf collimator part of the CMS definition for IMRT.
- ▶ "Stereotactic treatment visit" means a visit involving the use of a stereotactic guiding device with radiotherapy for the ablation of a precisely defined intracranial and/or extracranial tumor or lesion.
- ▶ "Intraoperative treatment visit" (IORT) means a treatment visit where a dose of megavoltage radiation is delivered to a surgically exposed neoplasm or cancerous organ/site using a dedicated unit.

MRT Survey Data (CY2017)

- ▶ 69 facilities provide MRT services
 - 30 MRT services are hospital based
 - 39 MRT services are freestanding

- ▶ 120 MRT units in Michigan
 - 112 Linear Accelerators
 - 6 Stereotactic Radio-Surgery units
 - 1 Total Body Irradiator
 - 1 High MRT

- ▶ 1,010,916 MRT equivalents were completed on the 120 MRT units
 - 959,673 non-special MRT visits
 - 51,243 special-purpose MRT visits

MRT Data – Patients, Visits & ETVs

CY	Patients Treated	Courses of Treatment	Total NS MRT Visits	Total NS ETVs
2017	27,497	29,759	533,562	959,673
2016	25,829	29,066	542,139	961,242
2015	26,298	30,874	533,977	907,448
2014	23,969	26,261	540,531	886,454
2013	25,438	28,819	559,749	913,435

2015 Survey – MRT Statewide Compliance Attachment A

HSA	# of Facility	# of MRT Units	#Met Volume	#Didn't Meet Volume	5-year Look Back
1-SOUTHEAST MICHIGAN	37	67	26	11	8 never met; 3 at least once
2-MID SOUTHERN	5	8	5	0	N/A
3-SOUTHWEST	3	7	2	1	1 never met
4-WEST MICHIGAN	6	12	5	1	1 never met
5-GENESEE-LAPEER-SHIAWASSEE	4	7	2	2	2 never met
6-EAST CENTRAL	8	12	5	3	3 never met
7-NORTHERN LOWER	3	6	3	0	N/A
8-UPPER PENINSULA	2	2	1	1	1 never met

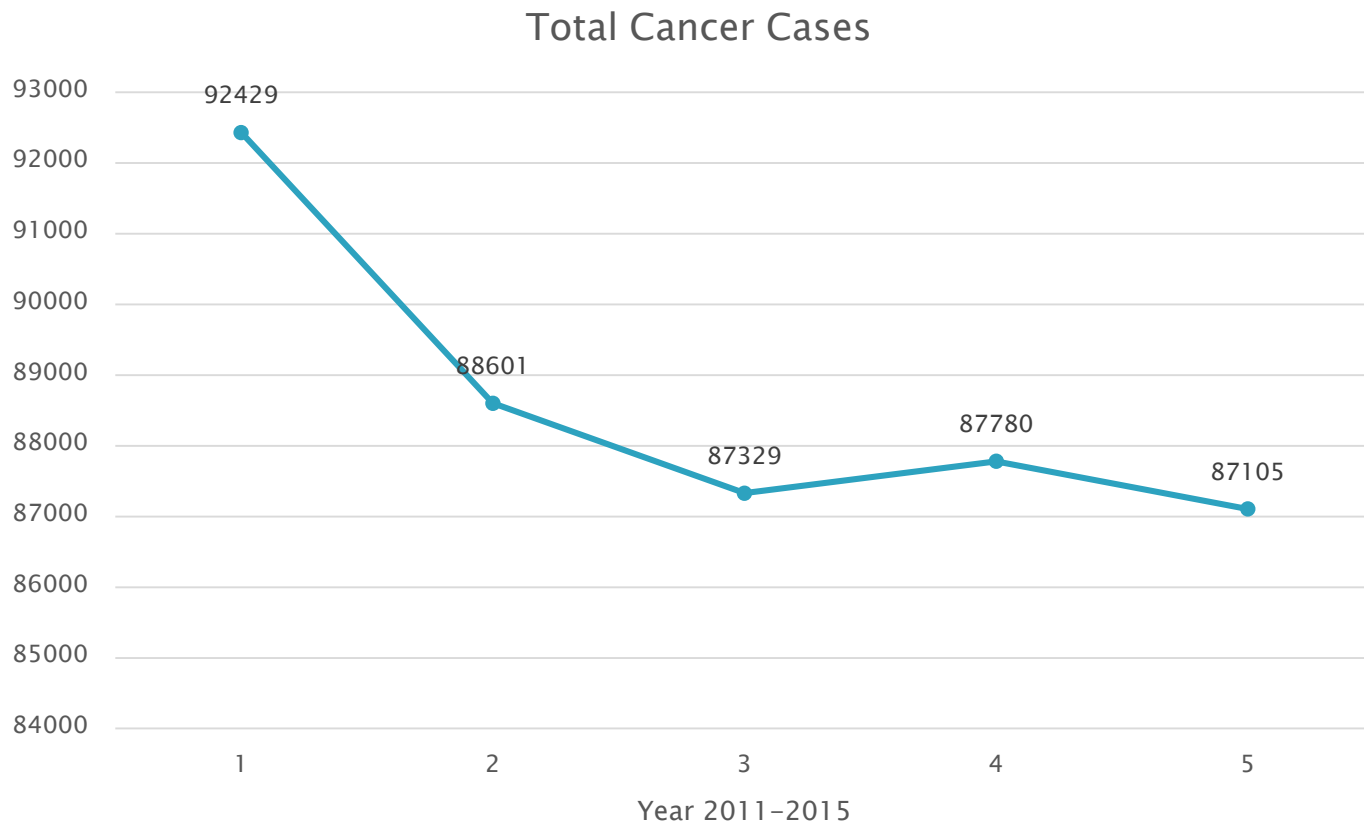
Invasive Cancer Cases—MI Residents (2011–2015)

Attachment A

Primary Site	2011	2012	2013	2014	2015	5-Year Trend
Gastrointestinal Tract & Digestive System Total	10539	10691	10651	10828	10661	1.2%
Respiratory System & Pleura Total	8533	8497	8364	8573	8416	-1.4%
Bones and Soft Tissue	475	469	440	450	419	-11.8%
Melanoma of Skin	2088	2071	2135	2167	2334	11.8%
Breast	7545	7847	7931	7567	7637	1.2%
Genitourinary Organs Total	17332	15234	14660	14602	14491	-16.4%
Brain and Other Central Nervous System	741	736	696	739	706	-4.7%
Hodgkin Lymphoma	283	289	265	316	240	-15.2%
Non-Hodgkin Lymphoma	2279	2343	2365	2267	2380	4.4%
Multiple Myeloma	784	753	779	814	884	12.8%
Leukemia	1641	1544	1545	1683	1620	-1.3%
All Other	3785	3705	3823	3771	3749	-1.0%
Total Cancer Cases	92429	88601	87329	87780	87105	-5.8%

Source: MDHHS Division of Vital Records & Health Statistics [11/30/2017]

Invasive Cancer Cases—MI Residents (2011–2015) Attachment A



Source: MDHHS Division of Vital Records & Health Statistics [11/30/2017]

Questions

Tulika Bhattacharya, Manager
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Matt Weaver, Reviewer/Specialist
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Katie Timer, Compliance Analyst
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2018 MRTSAC Review of Treatment Times from Various Institutions

M Salim U Siddiqui, MD, PhD

Senior Staff Physician

Director, Stereotactic Radiation
Program

Director, MR Simulation Program

Department of Radiation
Oncology

Medical Director, HFCI Physician
Partnering

Medical Director, HFCI
Northwest Region

Henry Ford Cancer Institute

Henry Ford Health System

Additive Factors

	A	B	C	D	E	F	G	H	I
Gating	+15 min	+15 to 30 min							
MR-Guided Real Time Tracking w/o Adaptive	+30 min								
MR-Guided Real Time Tracking Radiation WITH Adaptive	+45 min								40 min
Patient specific QA for IMRT	20 to 30 min		20 to 30 minutes	60 minutes	60 min	15 min	15 min	15 min	70 min
Patient specific QA for SRS	60 min		60 minutes	Patient specific QA for SRS	45 min	15 min	15 min	15 min	90 min
Patient specific QA for SBRT	60 min		60 minutes	10 minutes	45 min	15 min	15 min	15 min	

Summary of Typical Treatment Times

Treatment Visit Category	Time for Typical Treatment
Simple*	10 min
Intermediate*	15 min
Complex**	30 min
IMRT**	25 min
Total Body Irradiation	75 min
HMRT Therapy	
SRS/SBRT	60 min
IORT	
Additive Factors	
Gating	+15 min
SRS/SBRT Additional Isocenters	+20 min per isocenter
MR-Guided Real Time Tracking w/o Adaptive	+30 min
MR-Guided Real Time Tracking Radiation WITH Adaptive	+45 min
Additional Machine Time Use	
Patient Specific QA for iMRT	30 min
Patient Specific QA for SRS/SBRT	45 min

Discussion, Thoughts, Questions



Re-Evaluating ETV Thresholds: MRT-SAC Meeting

Paul Chuba, MD

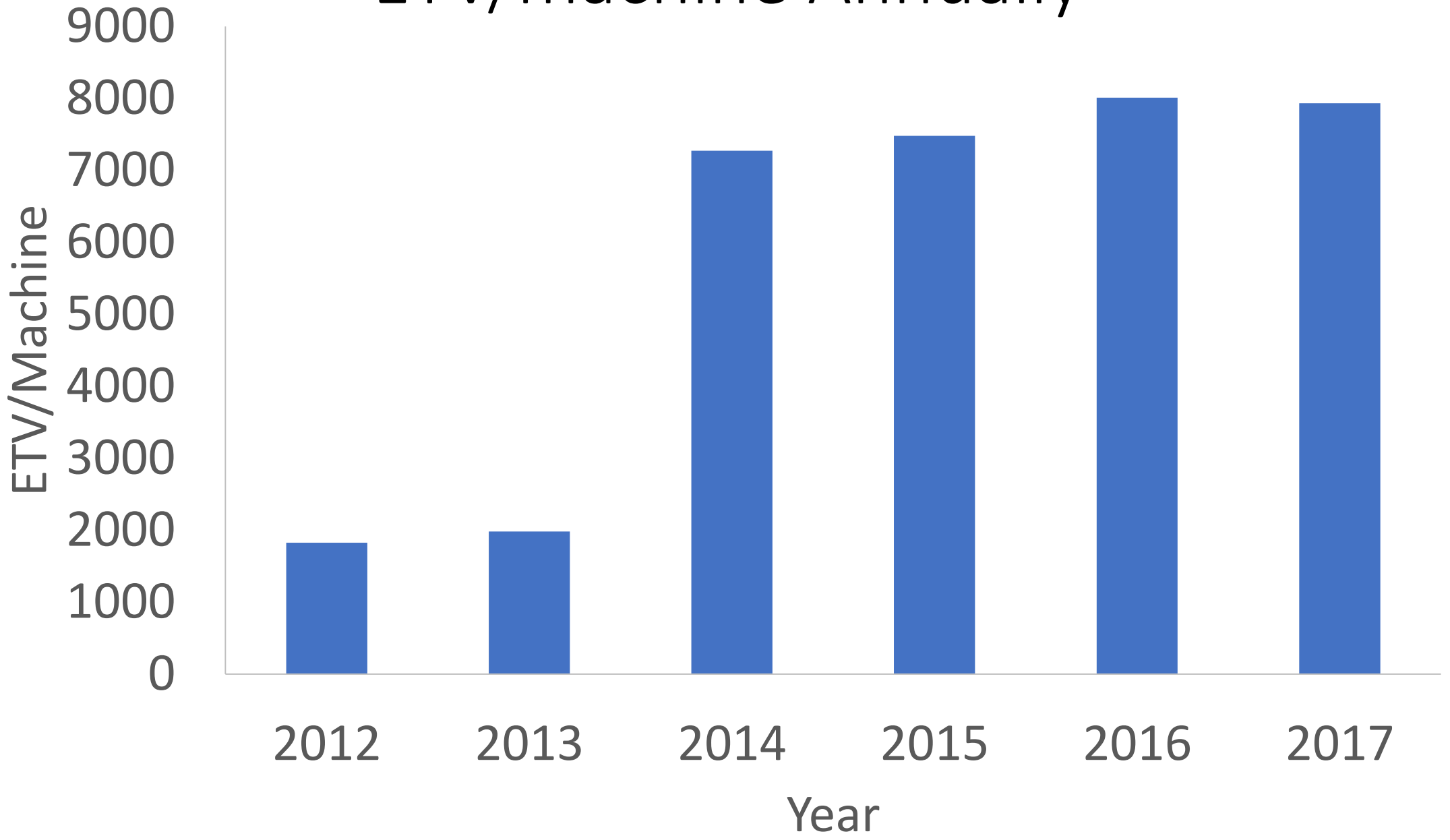
Jim Boylan, MSc

Kyle Verdecchia, PhD

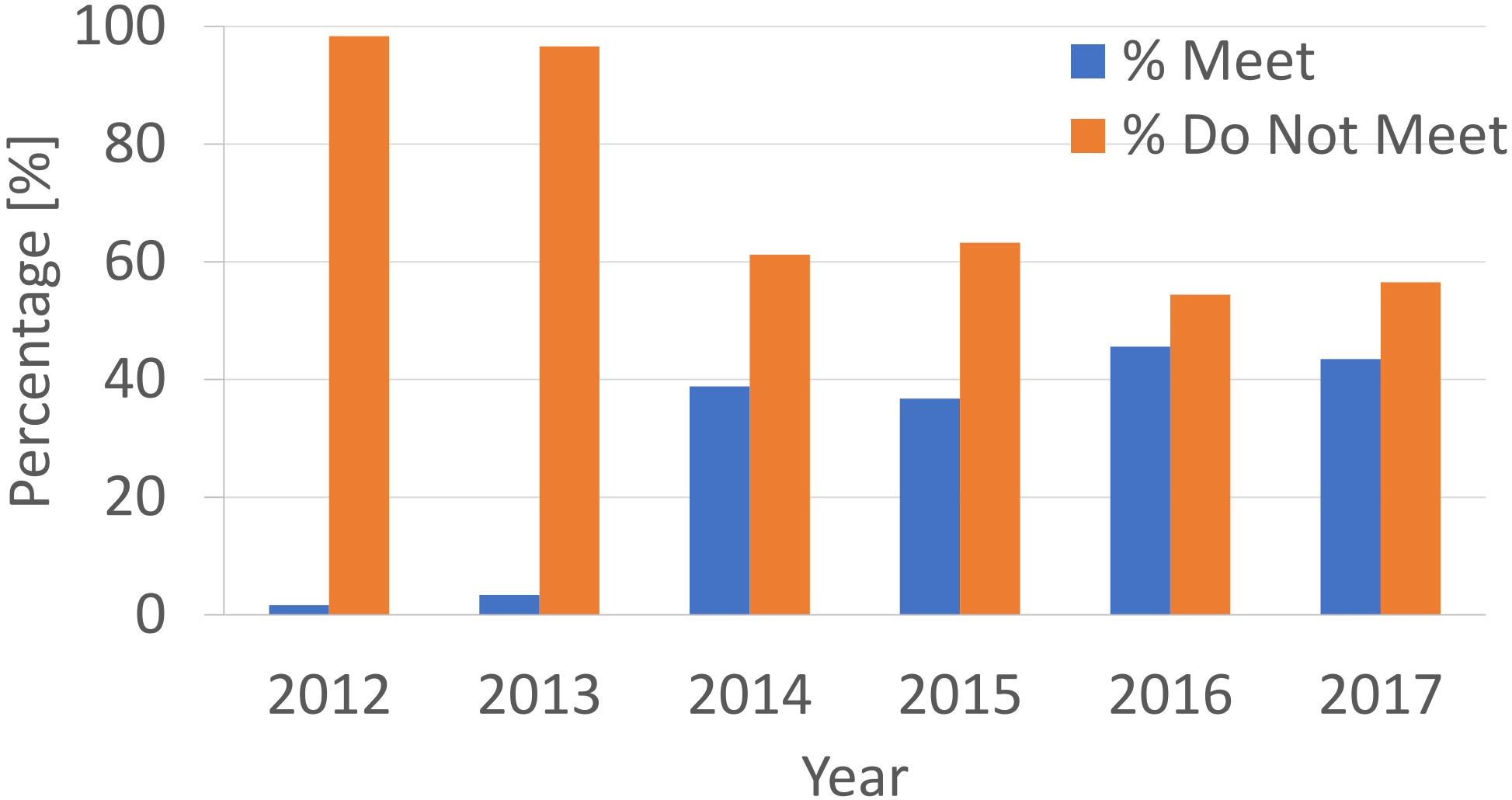
Ascension – St. John Providence

ETV/machine Annually

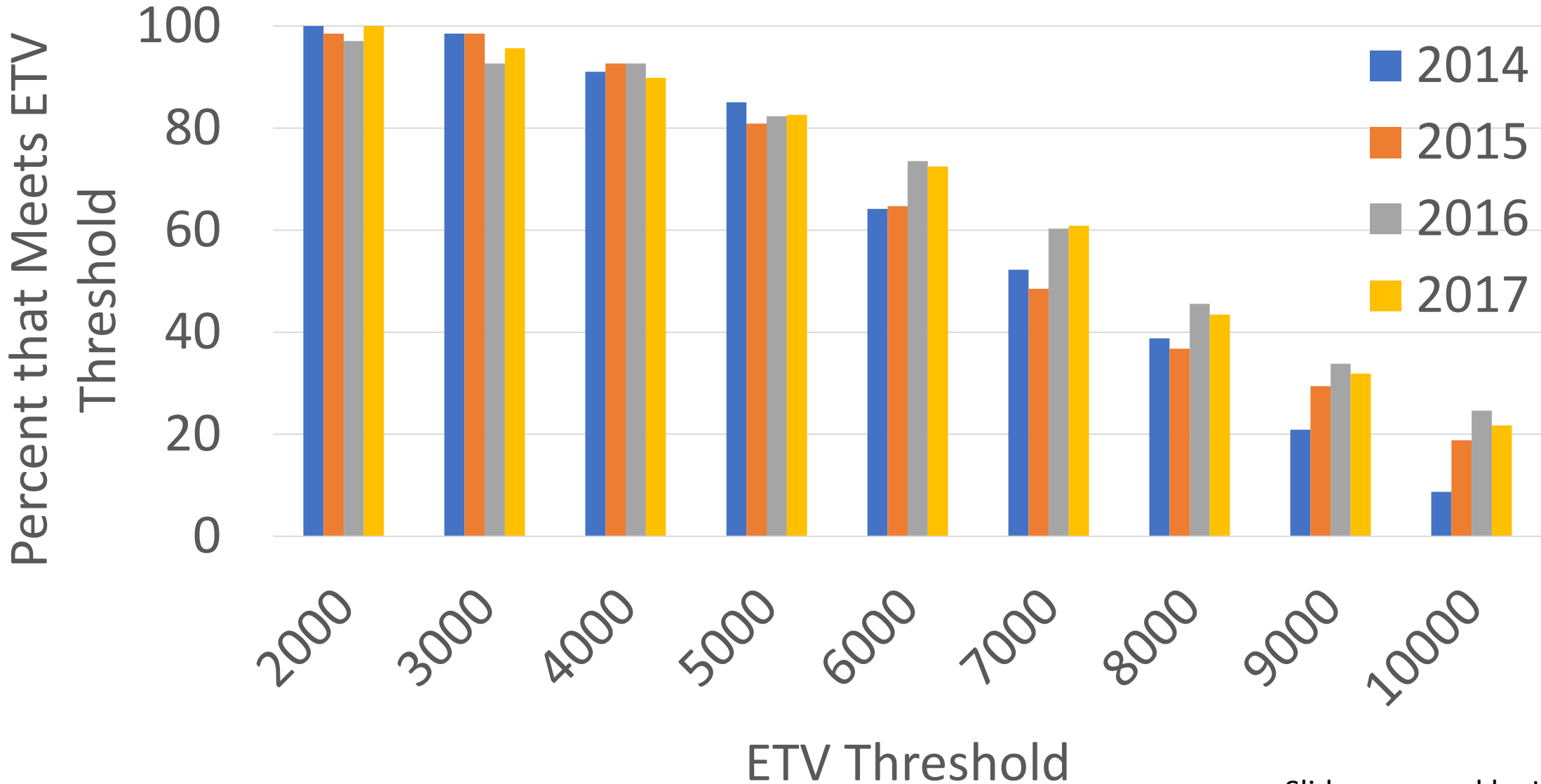
Attachment C



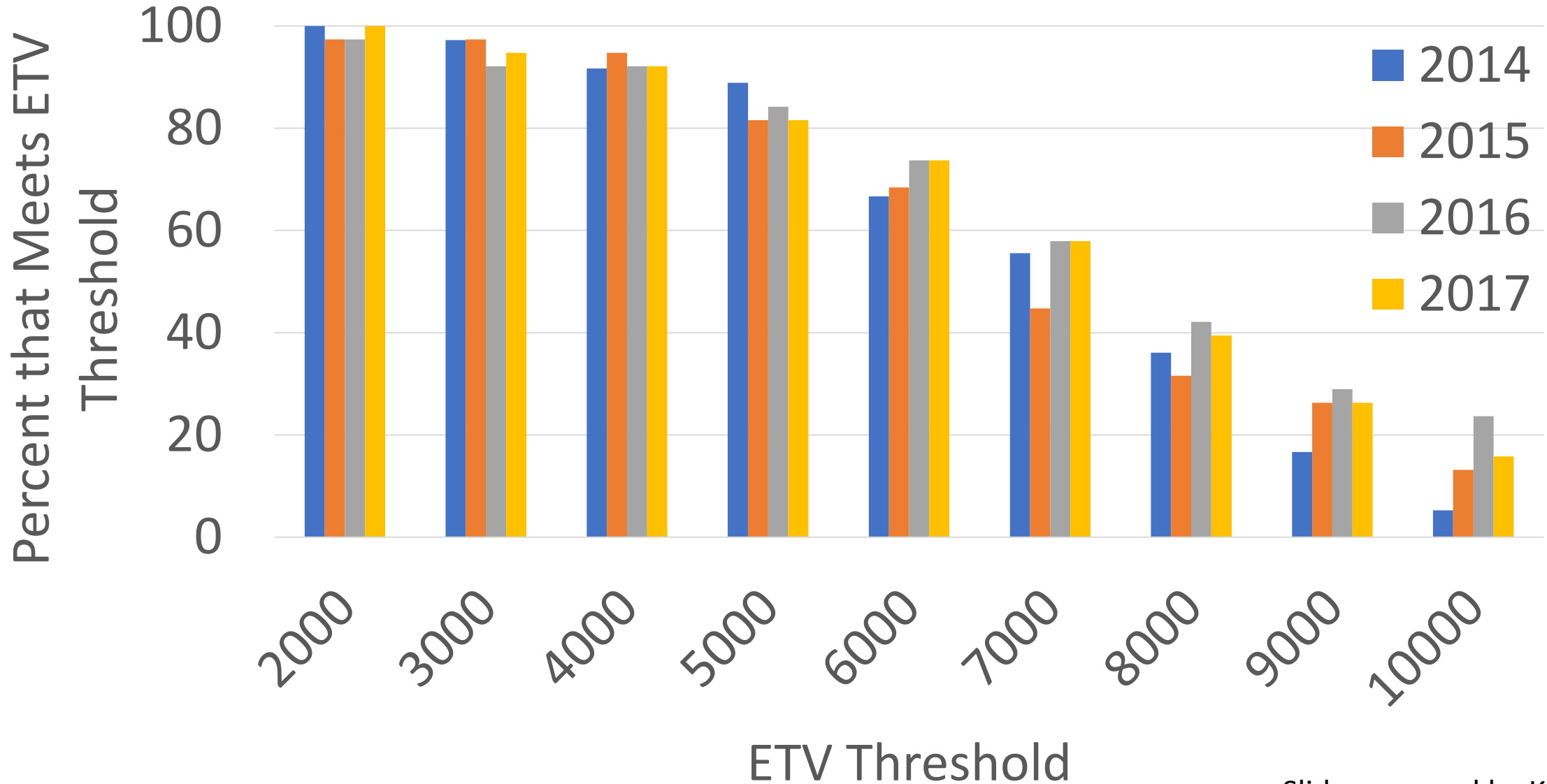
Percentage of Centers with ETV/machine >8000



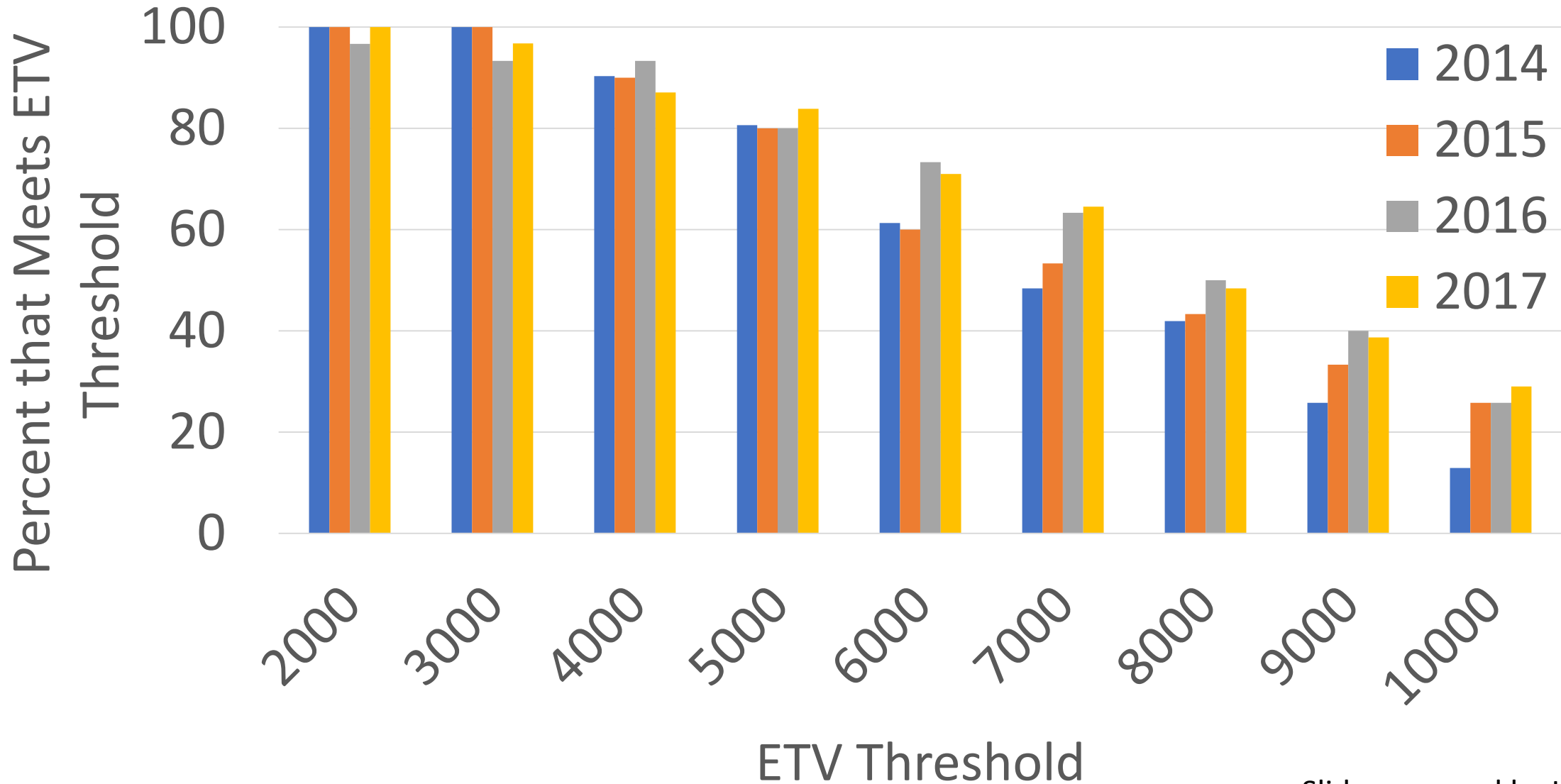
Estimate of ETV/machine Threshold Annually: Michigan



Estimate of ETV/machine Threshold Annually: Southeast

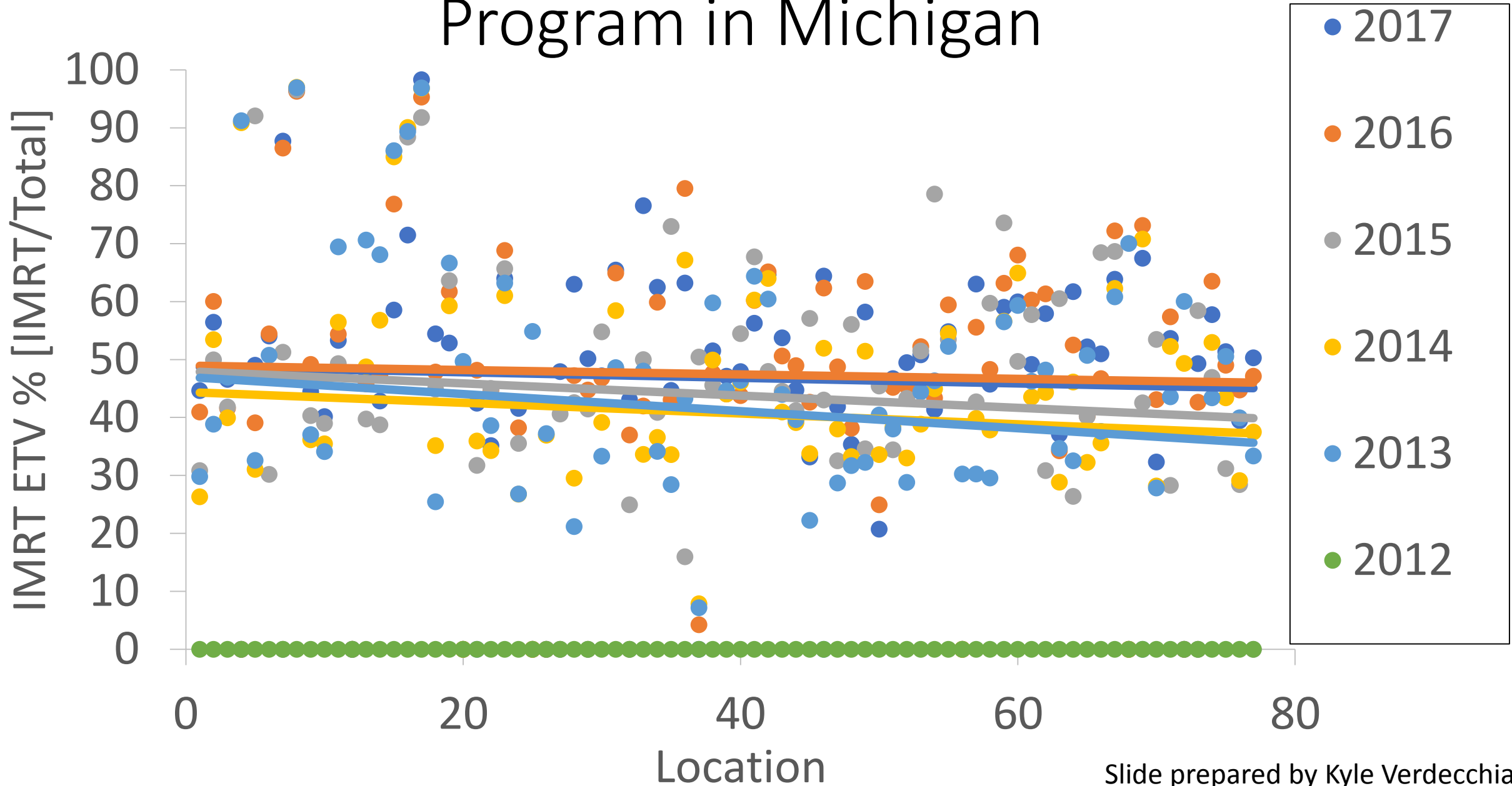


Estimate of ETV/machine Threshold Annually: Rural (All regions excluding southeast)



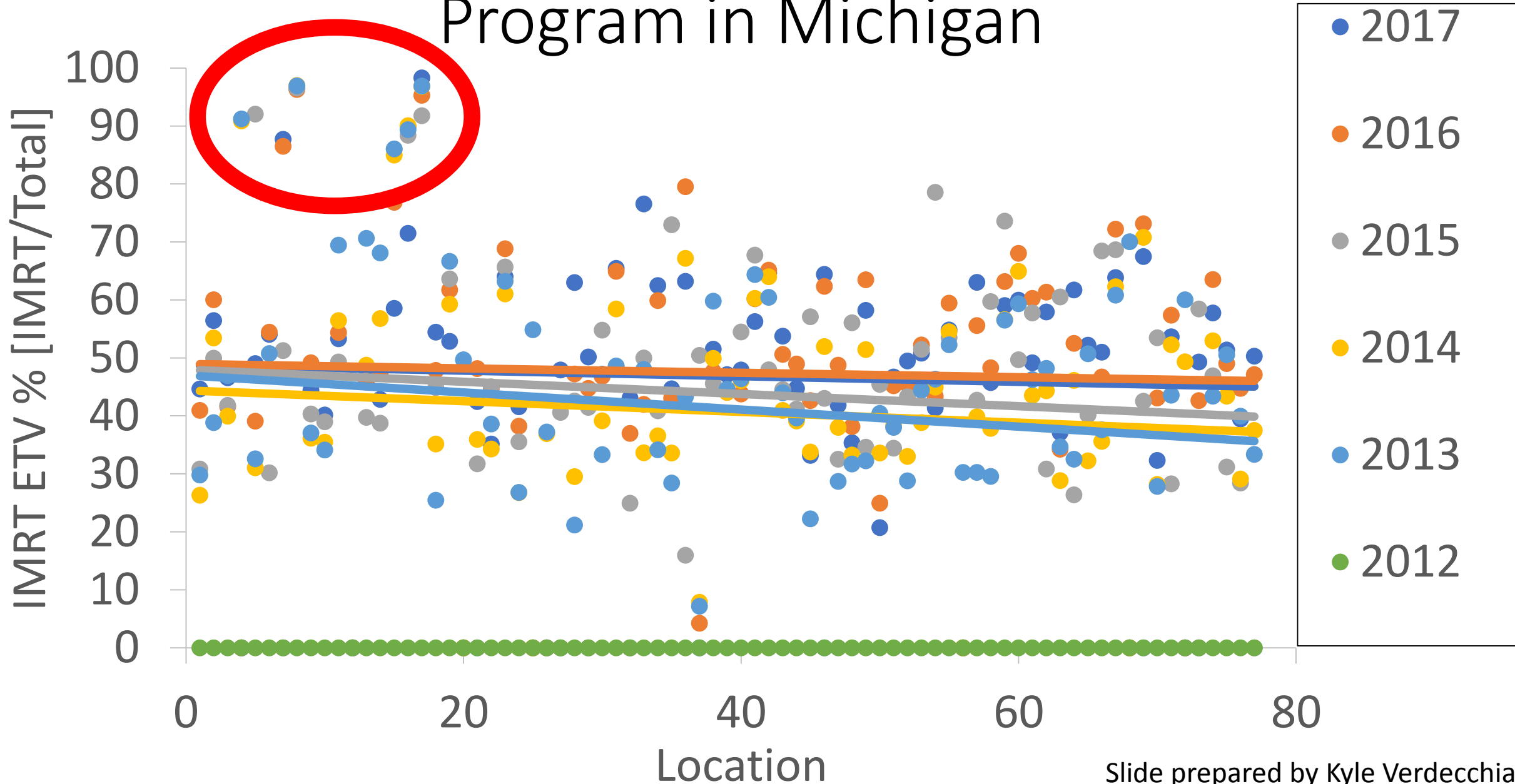
Percentage of IMRT Annually by Cancer Program in Michigan

Attachment C



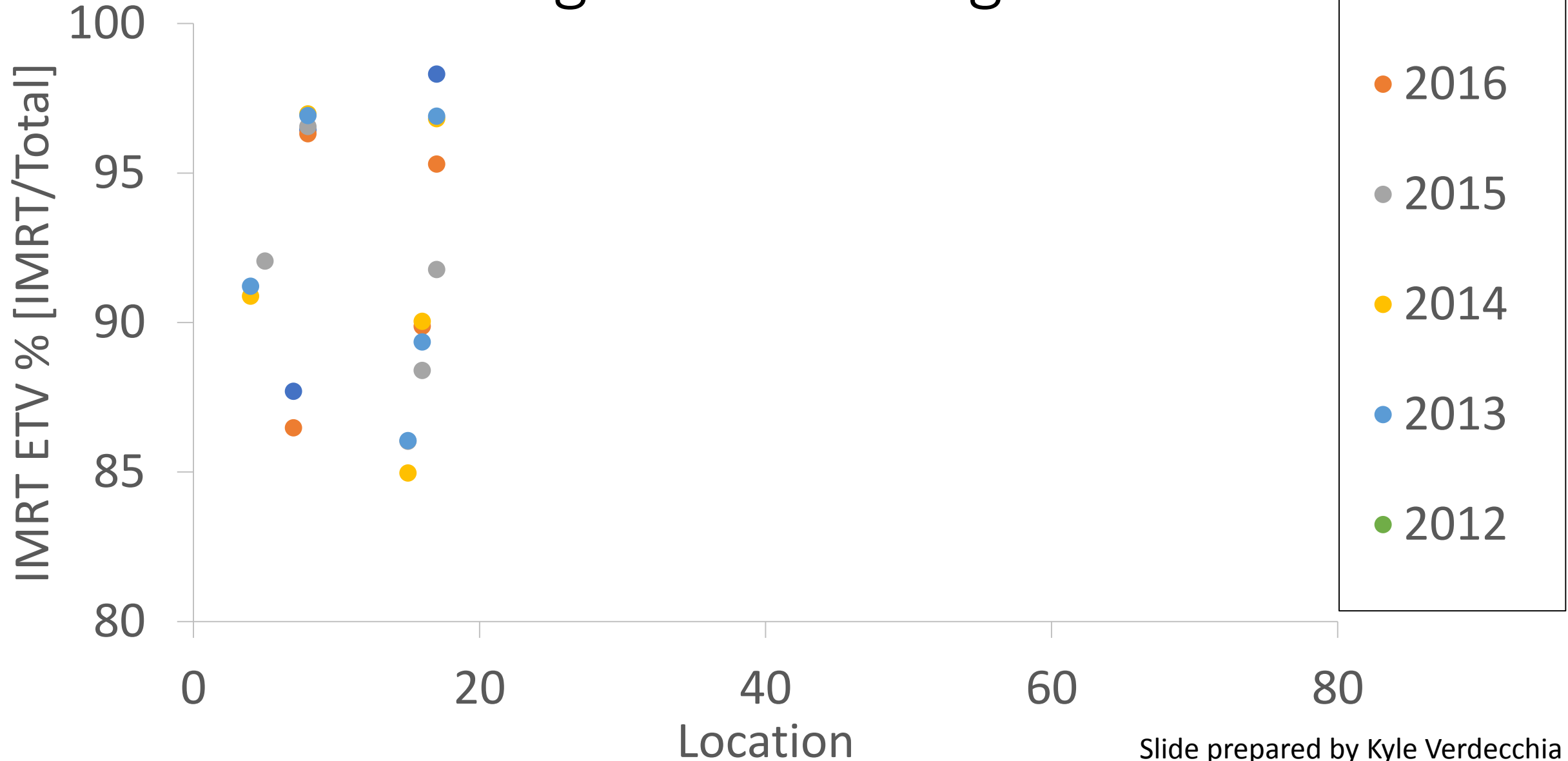
Percentage of IMRT Annually by Cancer Program in Michigan

Attachment C



Percentage of IMRT Annually by Cancer Program in Michigan

Attachment C



Revised
Weights Based
on Typical
Treatment
Times

Treatment Visit Category	2016 Weight	Time for Typical Treatment	Revised Weight
Simple*	1	10 min	1
Intermediate*	1.1	15 min	1.5
Complex**	1.25	30 min	3
IMRT**	2	25 min	2.5
Total Body Irradiation	8	75 min	7.5
HMRT Therapy	5		5
SRS/SBRT	8	60 min	6
IORT	20		20
Additive Factors (Additional weighting when this technology is applied to any of the treatments above)			
Gating	+1	+15 min	+1.5
SRS/SBRT Additional Isocenters	NEW	+20 min per isocenter	+2 per additional isocenter
MR-Guided Real Time Tracking w/o Adaptive	NEW	+30 min	+3
MR-Guided Real Time Tracking Radiation WITH Adaptive	NEW	+45 min	+4.5
Additional Machine Time Use			
Patient Specific QA for iMRT	NEW	30 min	3.0
Patient Specific QA for SRS/SBRT	NEW	45 min	4.5