Evaluating 2020 Age-Grade Standards Against 2019 Rankings

Alan Jones and Tom Bernhard
2020-06-20

Location of tables

The tables are in a public repository on GitHub.

https://github.com/AlanLyttonJones/Age-Grade-Tables

Introduction

Alan Jones has produced the road-running age-grade standards every five years since 2005. These standards were based on single-age bests at each distance as compiled by Ken Young who created the Association of Road Racing Statisticians (ARRS): http://arrs.run. Unfortunately, Ken died in 2018. The data used for the 2020 age-grade standards are comprised of Ken's most recent data along with significant new Masters data supplied by Tom Bernhard.

Using these revised data, Alan created new, standards for 2020. To evaluate them, Tom used the 2019 Masters age-graded rankings to compare the 2020 proposed standards against the 2015 standards. That is, he computed each runner's performance factor which is a percentage of how close that runner is to running the age standard for the runner's age and gender. In this document, the rankings for the distances 1 Mile, 5 km, 10 km, Half Marathon, and Marathon are given in a table. These are the same distances that Alan uses in determining the factors since more races are held at these distances. He interpolates to determine the standards at the other distances. After each of Tom's tables, a graph showing the 2015 and 2020 factors vs age are displayed along with an explanation of the differences observed in each table.

The data for the road mile are quite sparse. The Road Mile age-grade standards were created using the 5 km age-factors and the Mile Open Class (OC) times for both men and women.

Approval by LDR of the USATF

On May 20, 2020, these standards were approved by the Long Distance Running Council of USAT Track and Field.

1 Mile Men

Name	Age	Time	Race	Location	Date	2015 Factors	2020 Factors	2015 Factors Place	2020 Factors Place
Nat Larson	57	4:56	USATF Masters 1 Mile Championships	Flint, MI	8/23/2019	92.04%	92.06%	1	1
Mark Zamek	56	4:55	USATF Masters 1 Mile Championships	Flint, MI	8/23/2019	91.62%	91.62%	2	2
Charles Novak	51	4:46	Liberty Mile	Pittsburgh, PA	8/9/2019	90.88%	90.77%	3	4
Tim Van Orden	51	4:46	USATF Masters 1 Mile Championships	Flint, MI	8/23/2019	90.88%	90.77%	4	5
David Noyes	59	5:05	Liberty Mile	Pittsburgh, PA	8/9/2019	90.79%	90.85%	5	3
Mark Zamek	56	4:58	Midland Avenue Mile	Montclair, NJ	8/28/2019	90.69%	90.69%	6	6
Kenneth Barbee	56	4:58	Midland Ave Mile	Montclair, NJ	8/18/2019	90.69%	90.69%	7	7
Michael Madson	46	4:37	USATF Masters 1 Mile Championships	Flint, MI	8/23/2019	90.36%	90.16%	8	8
David Westenberg	61	5:13	USATF Masters 1 Mile Championships	Flint, MI	8/23/2019	89.94%	90.05%	9	9
Mike Kearns	65	5:25	Liberty Mile	Pittsburgh, PA	8/9/2019	89.59%	89.80%	10	11
Alan Wells	56	5:02	USATF Masters 1 Mile Championships	Flint, MI	8/23/2019	89.49%	89.49%	11	13
Chuck Bridgeman	58	5:07	USATF Masters 1 Mile Championships	Flint, MI	8/23/2019	89.46%	89.51%	12	12
Doug Goodhue	77	6:20	USATF Masters 1 Mile Championships	Flint, MI	8/23/2019	89.43%	89.90%	13	10
John Borthwick	55	5:00	USATF Masters 1 Mile Championships	Flint, MI	8/23/2019	89.38%	89.36%	14	14
Charlie Muse	63	5:21	Navy Mile	Washington, DC	10/6/2019	89.18%	89.33%	15	15

The changes are rather small. There was no change for a 56-year-old runner. Ages less than 56 were slightly hurt while those above 56 were slightly helped by the new standards.
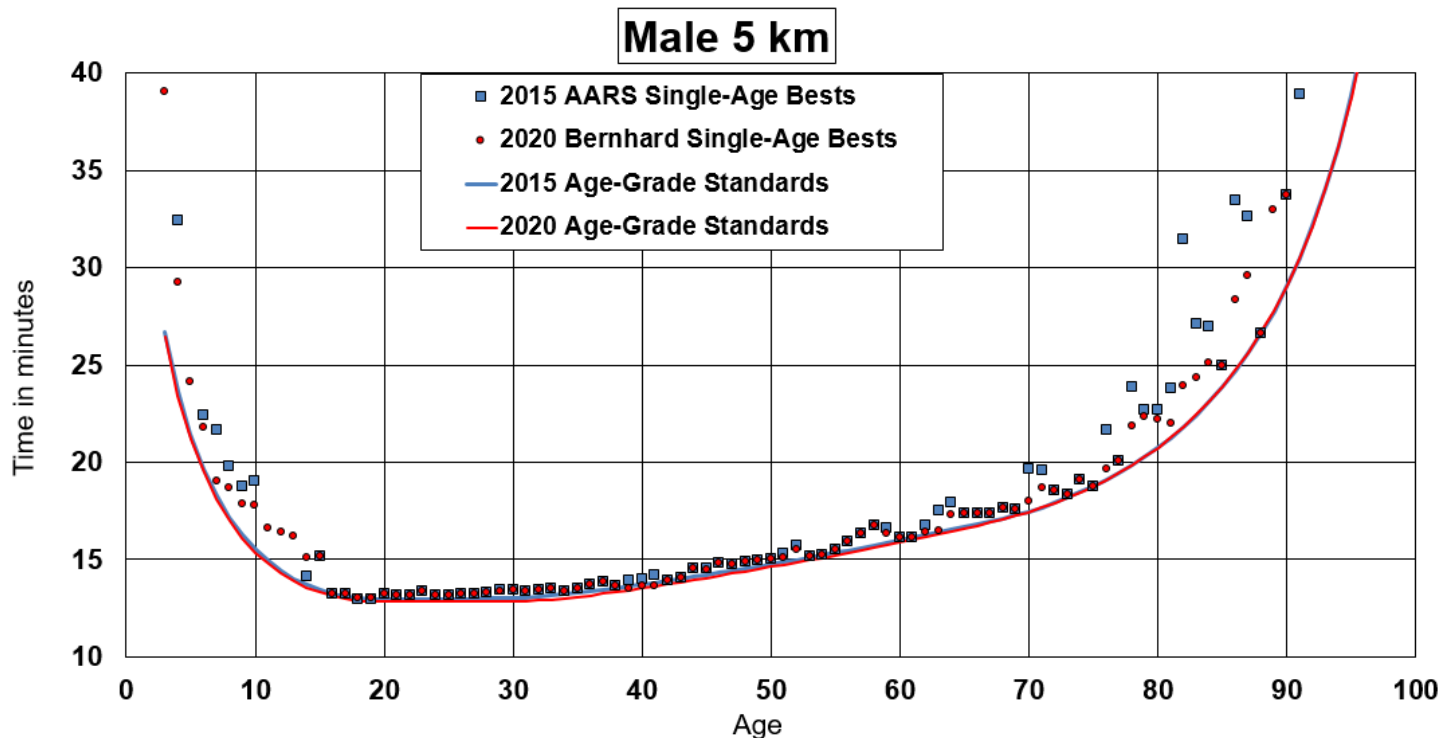
1 Mile Women

Name	Age	Time	Race	Location	Date	2015 Factors	2020 Factors	2015 Factors Place	2020 Factors Place
Jeannie Rice	71	6:25	USATF Masters 1 Mile Championships	Flint, MI	8/23/2019	97.15%	95.27%	1	1
Marisa Sutera Strange	56	5:28	USATF Masters 1 Mile Championships	Flint, MI	8/23/2019	94.16%	92.33%	2	2
Doreen McCoubrie	57	5:32	USATF Masters 1 Mile Championships	Flint, MI	8/23/2019	94.12%	92.29%	3	3
Sonja Friend-Uhl	48	5:06	USATF Masters 1 Mile Championships	Flint, MI	8/23/2019	92.34%	90.55%	4	4
Sonja Friend-Uhl	48	5:07	Music City Distance Carnival, Mile	Nashville, TN	5/31/2019	92.04%	90.25%	5	5
Nancy Simmons	60	5:54	USATF Masters 1 Mile Championships	Flint, MI	8/23/2019	91.49%	89.72%	6	6
Fiona Bayly	52	5:23	USATF Masters 1 Mile Championships	Flint, MI	8/23/2019	91.36%	89.59%	7	7
Lisa Veneziano	54	5:35	USATF Masters 1 Mile Championships	Flint, MI	8/23/2019	90.10%	88.35%	8	8
Carmen Ayala-Troncoso	60	6:00	Manzano Mile	Austin, TX	2/16/2019	89.97%	88.22%	9	9
Nora Cary	64	6:19	Midland Ave Mile	Montclair, NJ	8/18/2019	89.84%	88.10%	10	10
Jill Miller-Robinett	64	6:27	Mile of Truth	Danville, CA	5/5/2019	87.99%	86.28%	11	11
Hronn Gudmundsdottir	53	5:40	Mile of Truth	Danville, CA	5/5/2019	87.78%	86.07%	12	12
Lorraine Jasper	57	5:56	Navy Mile	Washington, DC	10/6/2019	87.77%	86.07%	13	13
Patrice Combs	62	6:22	USATF Masters 1 Mile Championships	Flint, MI	8/23/2019	86.90%	85.22%	14	14
Amy Fakterowitz	51	5:37	USATF Masters 1 Mile Championships	Flint, MI	8/23/2019	86.60%	84.93%	15	15

Women of all ages were slightly hurt by the 2020 standards but there were not enough changes across the age range to change the order of finish.

5 km Men

Name	Age	Time	Race	Location	Date	2015 Factors	2020 Factors	2015 Factors Place	2020 Factors Place
Sean Wade	53	15:25	Carlsbad 5000	Carlsbad, CA	4/14/2019	97.93%	97.08%	1	1
Sean Wade	52	15:28	Houston Heights 5K	Houston, TX	6/1/2019	96.85%	95.98%	2	2
Andrew Duncan	51	15:58	Carlsbad 5000	Carlsbad, CA	4/14/2019	93.10%	92.23%	3	4
Tim Van Orden	51	16:00	Run Westfield 5K	Westfield, MA	5/18/2019	92.91%	92.04%	4	5
John Barbour	65	17:58	Run Westfield 5K	Westfield, MA	5/18/2019	92.69%	92.33%	5	3
Nat Larson	57	16:54	USATF Masters 5K Championships	Atlanta, GA	8/17/2019	92.20%	91.54%	6	8
Christian Cushing-Murray	51	16:08	Carlsbad 5000	Carlsbad, CA	4/14/2019	92.14%	91.28%	7	9
Roger Sayre	61	17:29	USATF Masters 5K Championships	Atlanta, GA	8/17/2019	92.09%	91.58%	8	7
Tony Marshall	74	20:02	Carlsbad 5000	Carlsbad, CA	4/14/2019	92.06%	92.03%	9	6
Jacques Sallberg	44	15:21	Carlsbad 5000	Carlsbad, CA	4/14/2019	91.91%	90.83%	10	12
John Van Danacker	56	16:51	Brian Kraft 5K	Minneapolis, MN	5/27/2019	91.74%	91.05%	11	10
Kenneth Barbee	55	16:44	Haddonfield Adrenaline 5K	Haddonfield, NJ	3/16/2019	91.65%	90.92%	12	11
Andy Gardiner	53	16:29	B.A.A. 5K	Boston, MA	4/13/2019	91.59%	90.80%	13	13
Neville Davey	43	15:21	Carlsbad 5000	Carlsbad, CA	4/14/2019	91.24%	90.15%	14	16
Mark Andrews	48	15:57	USATF Masters 5K Championships	Atlanta, GA	8/17/2019	91.10%	90.16%	15	15
Jaime Heilpern	49	16:05	Freedom Fest 5K	Morgan Hill, CA	7/4/2019	91.03%	90.12%	16	18

Notice that men of all ages were hurt by the new factors but the younger ones more than the older men.


Ages 30-60 are hurt because the OC changed by 1% and there was a new improved record at age 41. Ages 65 and above did not change much because there were no new single-age bests.

5 km Women

Name	Age	Time	Race	Location	Date	2015 Factors	2020 Factors	2015 Factors Place	2020 Factors Place
Jeannie Rice	71	21:49	John Clay 5K	Naples, FL	9/2/2019	98.12%	97.90%	1	1
Jan Holmquist	75	23:15	Run Westfield 5K	Westfield, MA	5/18/2019	97.58%	97.36%	2	2
Marisa Sutera Strange	56	18:38	USATF Masters 5K Championships	Atlanta, GA	8/17/2019	94.86%	94.65%	3	3
Marisa Sutera Strange	55	18:30	Freihofer's Run for Women 5K	Albany, NY	6/1/2019	94.45%	94.24%	4	4
Libby James	82	27:13	Freihofer's Run for Women 5K	Albany, NY	6/1/2019	94%	93.79%	5	5
Carmen Ayala-Troncoso	60	19:44	Carlsbad 5000	Carlsbad, CA	4/14/2019	93.94%	93.73%	6	6
Nora Cary	64	20:57	Harrington Park Fall Spectacular 5K	Harrington Park, NJ	11/2/2019	93.03%	92.82%	7	7
Nora Cary	64	21:03	New Milford Fire Dept. 5K Run	New Milford, NJ	6/15/2019	92.58%	92.37%	8	8
Fiona Bayly	52	18:17	Abbott Dash to the Finish Line 5K	New York, NY	11/2/2019	92.38%	92.17%	9	9
Kate Landau	42	16:39	Celebration 5K	Jacksonville, FL	7/4/2019	92.23%	92.02%	10	10
Karen Durante	68	22:17	Run for All Ages	Wakefield, MA	11/2/2019	92.18%	91.97%	11	11
Sonja Friend-Uhl	48	17:35	USATF Masters 5K Championships	Atlanta, GA	8/17/2019	91.97%	91.77%	12	12
Fiona Bayly	52	18:23	USATF Masters 5K Championships	Atlanta, GA	8/17/2019	91.88%	91.67%	13	13
Jane Treleven	70	22:59	National Senior Games 10k Road Race	Albuquerque, NM	6/21/2019	91.85%	91.64%	14	14
Roberta Groner	41	16:38	The Ridgewood Run 5K	Ridgewood NJ	5/27/2019	91.73%	91.52%	15	15

There is no change in the rankings because the changes are similar over the entire age range.
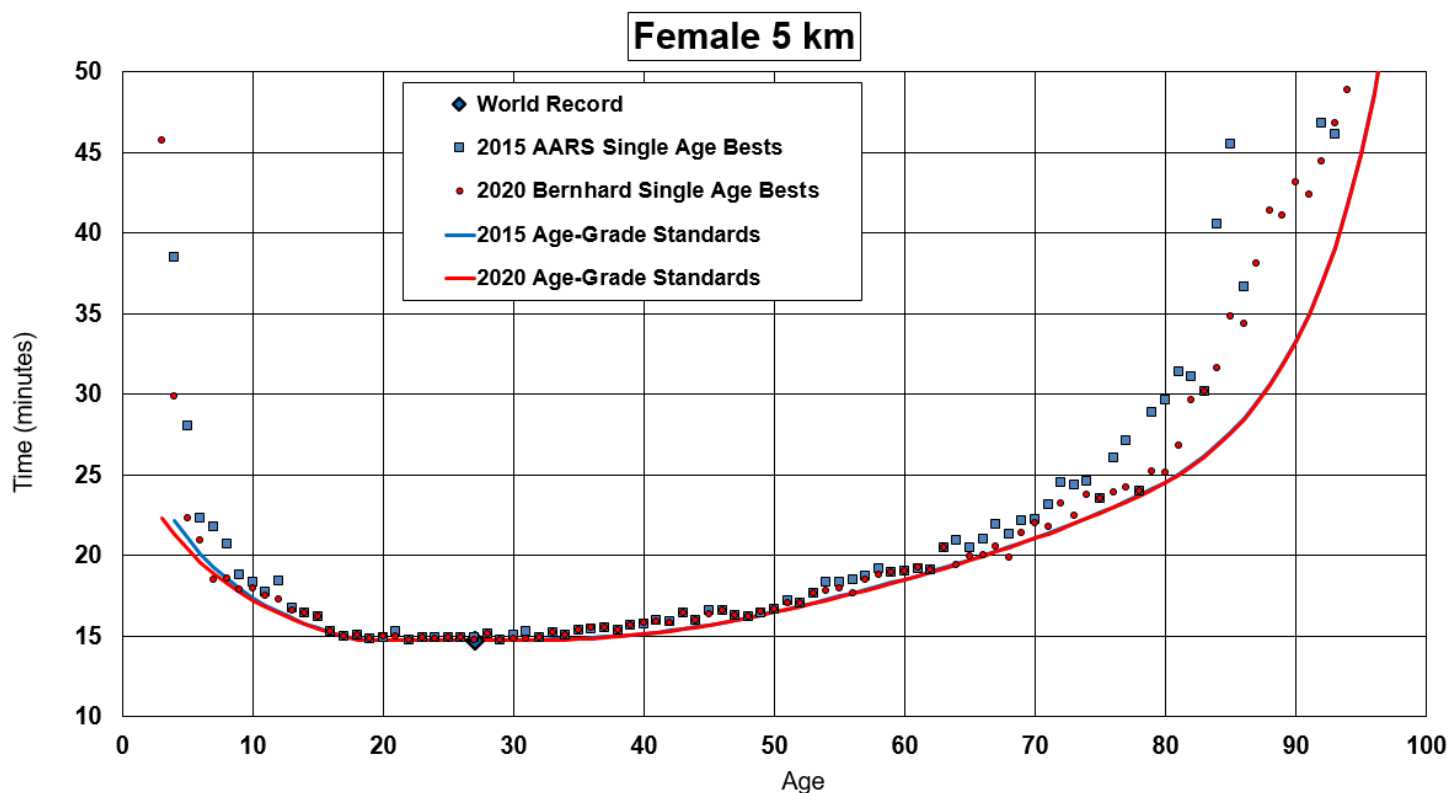

Note how the 2015 and 2020 lines almost fall on top of each other for ages above 15. The age 68 best is an outlier.

Men 10 km

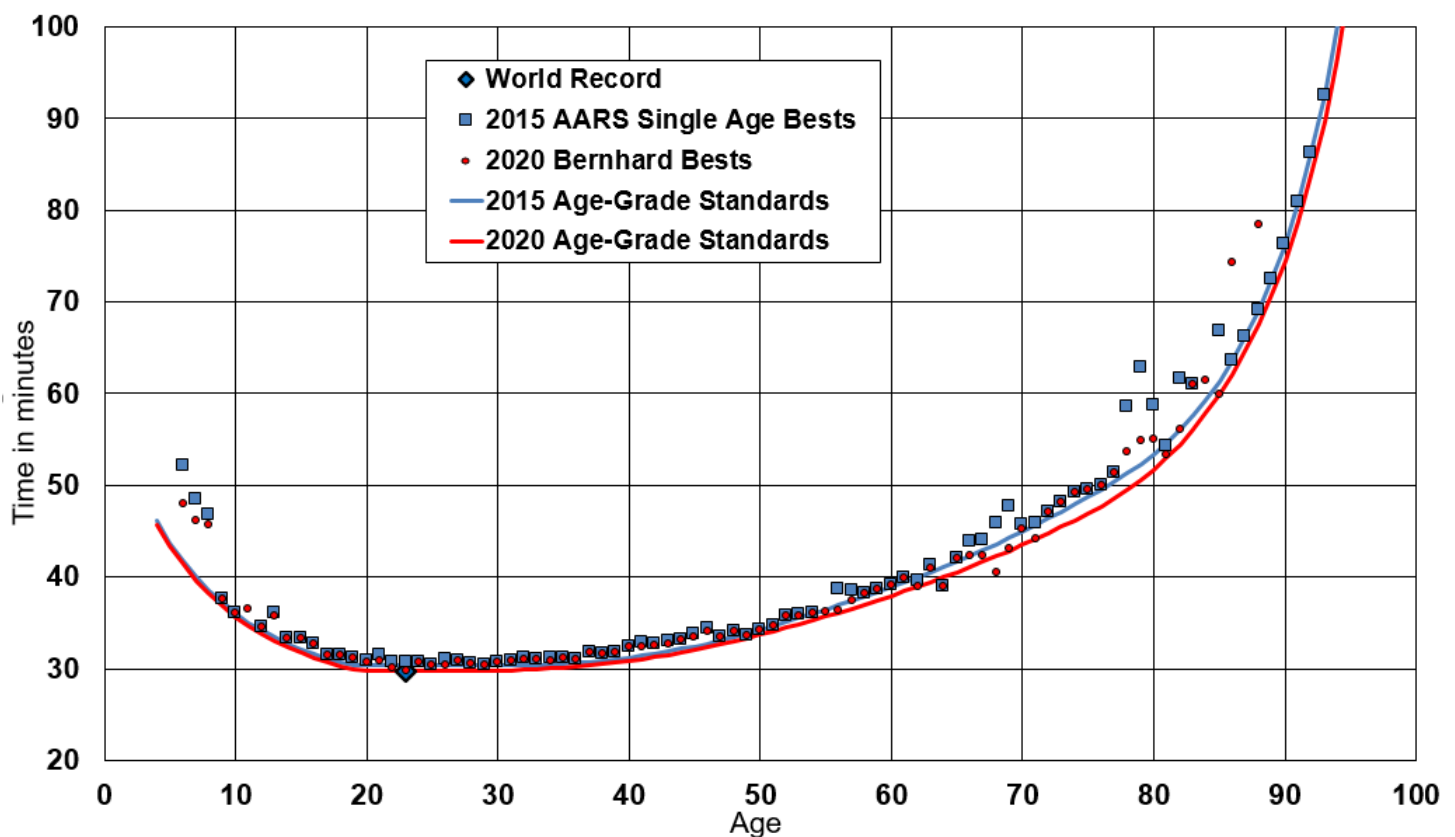| Age	Time	Race	Location	Date	2015 Factors	New 2020 Factors	2015 Factors Place	2020 Factors Place
47	29:58	Cooper River Bridge Run 10K	Charleston, SC	4/6/2019	97.79%	96.69%	1	1
42	29:21	Beach to Beacon 10K	Cape Elizabeth, ME	8/3/2019	95.91%	94.82%	2	2
47	30:47	USATF Masters 10K Championships	Dedham, MA	4/28/2019	95.20%	94.13%	3	3
47	30:52	Cresent City Classic 10K	New Orleans, LA	4/20/2019	94.94%	93.87%	4	4
42	30:00	Peachtree Road Race 10K	Atlanta, GA	7/4/2019	93.83%	92.77%	5	5
42	30:18	B.A.A. 10K	Boston, MA	6/23/2019	92.90%	91.85%	6	6
62	36:19	USATF Masters 10K Championships	Dedham, MA	4/28/2019	92.01%	91.03%	7	7
53	33:44	USATF Masters 10K Championships	Dedham, MA	4/28/2019	91.36%	90.36%	8	8
63	37:13	USATF Masters 10K Championships	Dedham, MA	4/28/2019	90.63%	89.67%	9	9
61	36:33	MDRA Victory 10K	Minneapolis, MN	9/2/2019	90.58%	89.60%	10	10
56	35:01	Get in Gear 10K	Minneapolis/St Paul, MN	4/27/2019	90.36%	89.37%	11	11
53	34:08	WMA Indoor Championships, 10K	TORUŃ, POL	3/29/2019	90.29%	89.30%	12	12
51	33:43	Cooper River Bridge Run 10K	Charleston, SC	4/6/2019	89.86%	88.87%	13	13
42	31:29	MDRA Victory 10K	Minneapolis, MN	9/2/2019	89.41%	88.40%	14	14
62	37:27	B.A.A. 10K	Boston, MA	6/23/2019	89.23%	88.27%	15	15

The places don't change.

Male 10 km
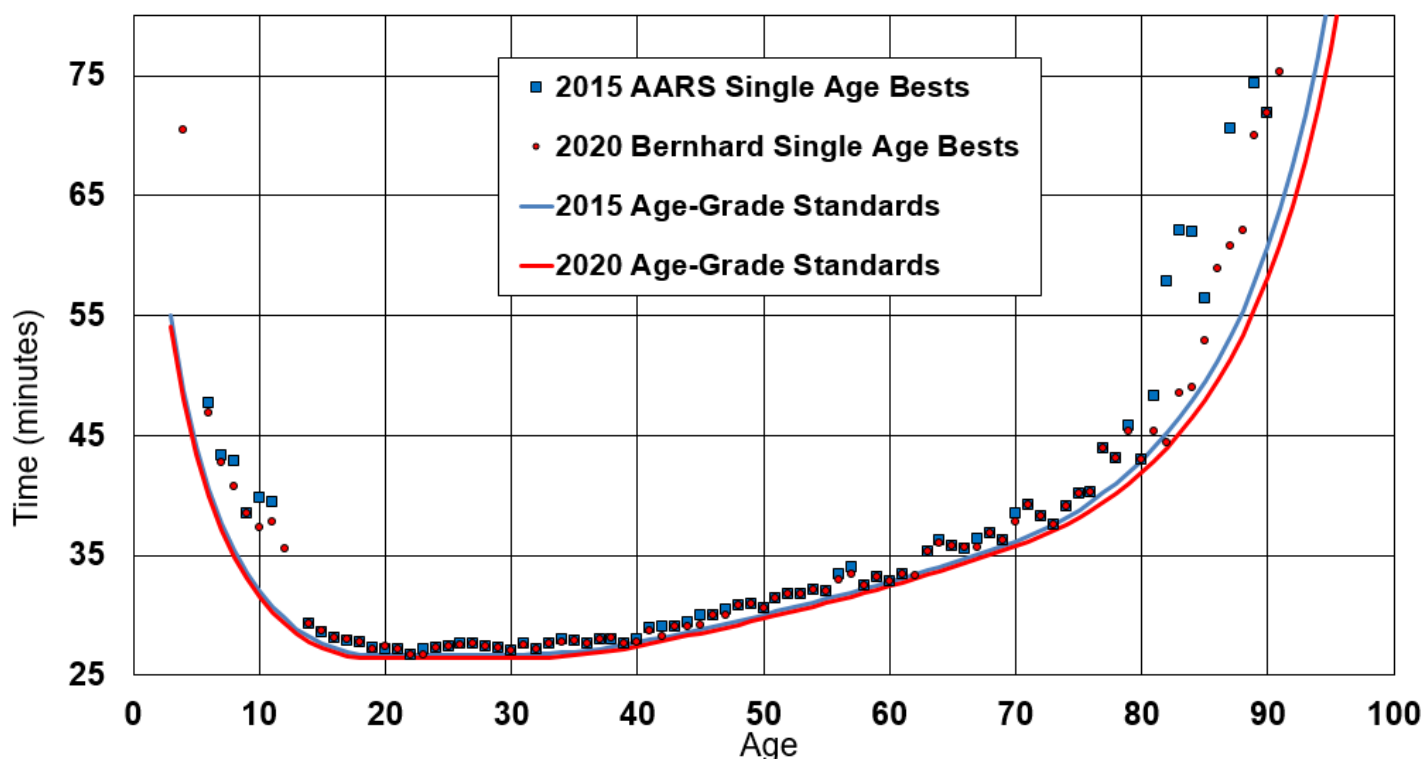
The factors are close up through age 70. Above 70 the standards get tougher due to a new record at age 82

Women 10 km

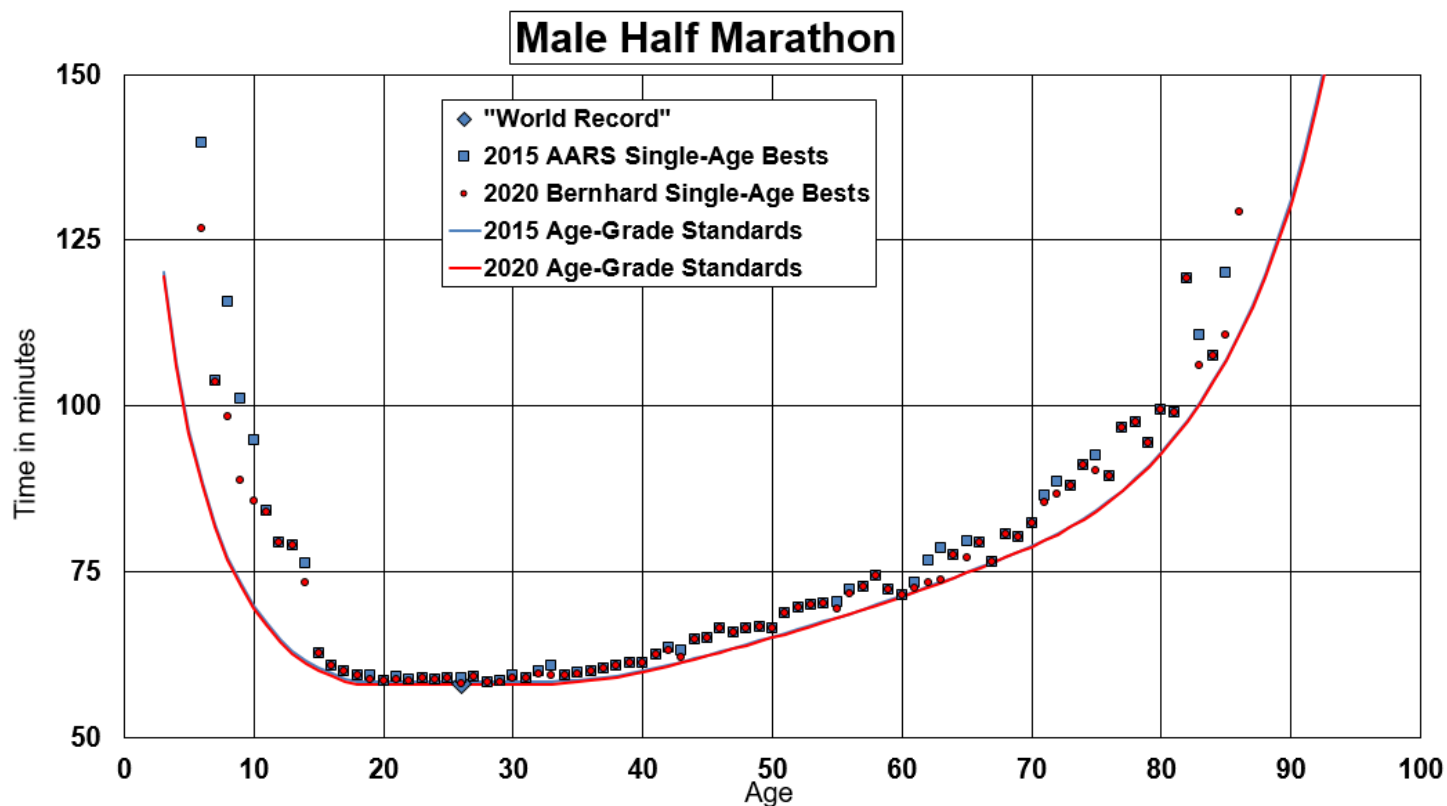| Age	Time	Race	Location	Date	2015 Factors	2020 Factors	2015 Factors Place	2020 Factors Place
71	44:19	Rock Hall Half Marathon, 10K	Cleveland, OH	8/18/2019	103%	99.56%	1	1
62	40:22	Bellin Run 10K	Green Bay, WI	6/8/2019	99%	96.50%	2	2
55	37:27	Run to Feed the Hungry	Sacramento, CA	11/22/2018	97.29%	95.32%	3	3
74	50:01	USATF Masters 10K Championships	Dedham, MA	4/28/2019	95.81%	92.30%	4	8
82	58:41	Bolder Boulder 10K	Bolder, CO	5/26/2019	95.46%	92.83%	5	5
64	43:07	Essex County Cherry Blossom 10K Ru	Newark, NJ	4/7/2019	95.33%	92.75%	6	6
55	38:25	USATF Masters 10K Championships	Dedham, MA	4/28/2019	94.85%	92.92%	7	4
64	43:40	USATF Masters 10K Championships	Dedham, MA	4/28/2019	94.13%	91.58%	8	11
59	40:49	Queens 10K	New York, NY	6/15/2019	94.01%	91.83%	9	9
41	33:33	Queens 10K	New York, NY	6/15/2019	93.67%	92.62%	10	7
50	36:44	Beach to Beacon 10K	Cape Elizabeth, ME	8/3/2019	93.31%	91.70%	11	10
71	48:58	USATF Masters 10K Championships	Dedham, MA	4/28/2019	93.22%	90.11%	12	21
56	39:40	Queens 10K	New York, NY	6/15/2019	93.03%	91.07%	13	12
64	44:16	Fred D'Elia Ridgewood Run 10K	Ridgewood, NJ	5/27/2019	92.85%	90.34%	14	17
64	44:21	New York Mini 10K	New York, NY	6/8/2019	92.68%	90.17%	15	19
48	36:14	Peachtree Road Race 10K	Atlanta, GA	7/4/2019	92.40%	90.96%	16	13

Female 10 km

The women from ages 55 through 85 are hurt by the new standards due to new records at ages 69, 71, 81, and 85. The times at ages 64 and 68 are deemed outliers.

Men Half Marathon

Name	Age	Time	Race	Location	Date	2015 Factors	2020 Factors	2015 Factors Place	2020 Factors Place
Abdi Abdirahman	42	1:03:12	United Airlines NYC Half	New York, NY	3/17/2019	96.44%	96.23%	1	1
Abdi Abdirahman	42	1:03:32	Rock 'n' Roll Philadelphia	Philadelphia, PA	9/15/2019	95.88%	95.67%	2	2
Gene Dykes	70	1:25:06	Philadelphia Marathon, Half Marathon	Philadelphia, PA	11/18/2018	92.65%	92.55%	3	3
Roger Sayre	61	1:17:49	WMA Indoor Championships, H Mar	TORUŃ, POL	3/29/2019	92.56%	92.42%	4	4
Brian Pilcher	62	1:19:04	Napa Valley Marathon, H Mar	Calistoga, CA	3/3/2019	91.98%	91.85%	5	5
Iain Mickle	58	1:16:59	Clarksburg Country Run H Mar	Clarksburg, CA	11/3/2019	90.94%	90.80%	6	6
John Vandanacker	56	1:15:45	Garry Bjorklund Half Marathon	Duluth, MN	6/22/2019	90.73%	90.57%	7	7
Nat Larson	56	1:16:07	New Bedford Half Marathon	New Bedford, MA	3/17/2019	90.29%	90.14%	8	8
Scott Lindell	51	1:12:55	Garry Bjorklund Half Marathon	Duluth, MN	6/22/2019	90.13%	89.96%	9	9
Andy Gardiner	54	1:15:01	B.A.A. Half Marathon	Boston, MA	10/13/2019	89.97%	89.81%	10	10
Doug Doodhue	77	1:37:23	Glass City Marathon, H Mar	Toledo, OH	4/27/2019	89.63%	89.59%	11	11
Sean Wade	53	1:14:42	Houston Half Marathon	Houston, TX	10/27/2019	89.55%	89.38%	12	12
Doug Baldwin	54	1:15:34	Garry Bjorklund Half Marathon	Duluth, MN	6/22/2019	89.32%	89.16%	13	13
Doug Keller	61	1:21:00	Monster Dash H Mar	Saint Paul, MN	10/26/2019	88.92%	88.79%	14	14
Guillermo Pineda Molales	46	1:10:50	Staten Island Half	New York, NY	10/13/2019	88.89%	88.70%	15	15

The changes are small resulting in unchanged places.

The two lines lie just about on top of each other. The OC improved by 0.63% which is roughly the change for the ages 5 to 32. The change is even smaller from ages 33 to 83.

Women Half Marathon

Name	Age	Time	Race	Location	Date	2015 Factors	2020 Factors	2015 Factors Place	2020 Factors Place
Jeannie Rice	71	1:37:01	Goodyear H Mar	Akron, OH	8/10/2019	102.01%	99.99%	1	1
Jeannie Rice	71	1:39:41	Pittsburgh Marathon, Half Marathon	Pittsburgh, PA	5/5/2019	99.28%	97.31%	2	2
Jeannie Rice	71	1:40:02	Parkersburg Half Marathon	Parkersburg, WV	8/1/2019	98.93%	96.97%	3	3
Jeannie Rice	70	1:38:42	Naples Daily News Half Marathon	Naples, FL	1/20/2019	98.70%	96.77%	4	4
Jenny Hitchings	56	1:22:51	Urban Cow Half Marathon	Sacramento, CA	10/6/2019	96.41%	94.84%	5	5
Jeannie Rice	71	1:43:07	Cleveland Marathon, Half Marathon	Cleveland, OH	5/18/2019	95.98%	94.07%	6	6
Roberta Groner	41	1:13:06	Brooklyn Half Marathon	Brooklyn, NY	5/18/2019	92.89%	91.76%	7	7
Karen Kunz	63	1:35:17	Napa Valley Marathon, H Mar	Calistoga, CA	3/3/2019	92.12%	90.49%	8	11
Grace Wasielewski	66	1:39:33	Chicago Half Marathon	Chicago, IL	9/29/2019	92.08%	90.38%	9	12
Perry Shoemaker	47	1:17:46	Shamrock Half Marathon	Virginia Beach, VA	3/17/2019	92.08%	90.77%	10	8
Suzanne La Burt	56	1:26:49	Brooklyn Half Marathon	Brooklyn, NY	5/18/2019	92%	90.51%	11	10
Roberta Groner	41	1:13:58	Houston Marathon, H Mar	Houston, TX	1/19/2019	91.80%	90.69%	12	9
Karen Kunz	64	1:37:01	Clarksburg Country Run H Mar	Clarksburg, CA	11/3/2019	91.77%	90.12%	13	16
Jane Lundy	59	1:30:33	Brooklyn Half Marathon	Brooklyn, NY	5/18/2019	91.75%	90.20%	14	14
Fiona Bayly	51	1:21:49	Brooklyn Half Marathon	Brooklyn, NY	5/18/2019	91.72%	90.32%	15	13
Suzanne La Burt	56	1:27:10	Staten Island Half	New York, NY	10/13/2019	91.63%	90.14%	17	15

There are several changes. Runners in their 60s are hurt by the new standards and those in the 40s and 50s are hurt also but not by as much, resulting in their places moving up. The graph helps to explain why.
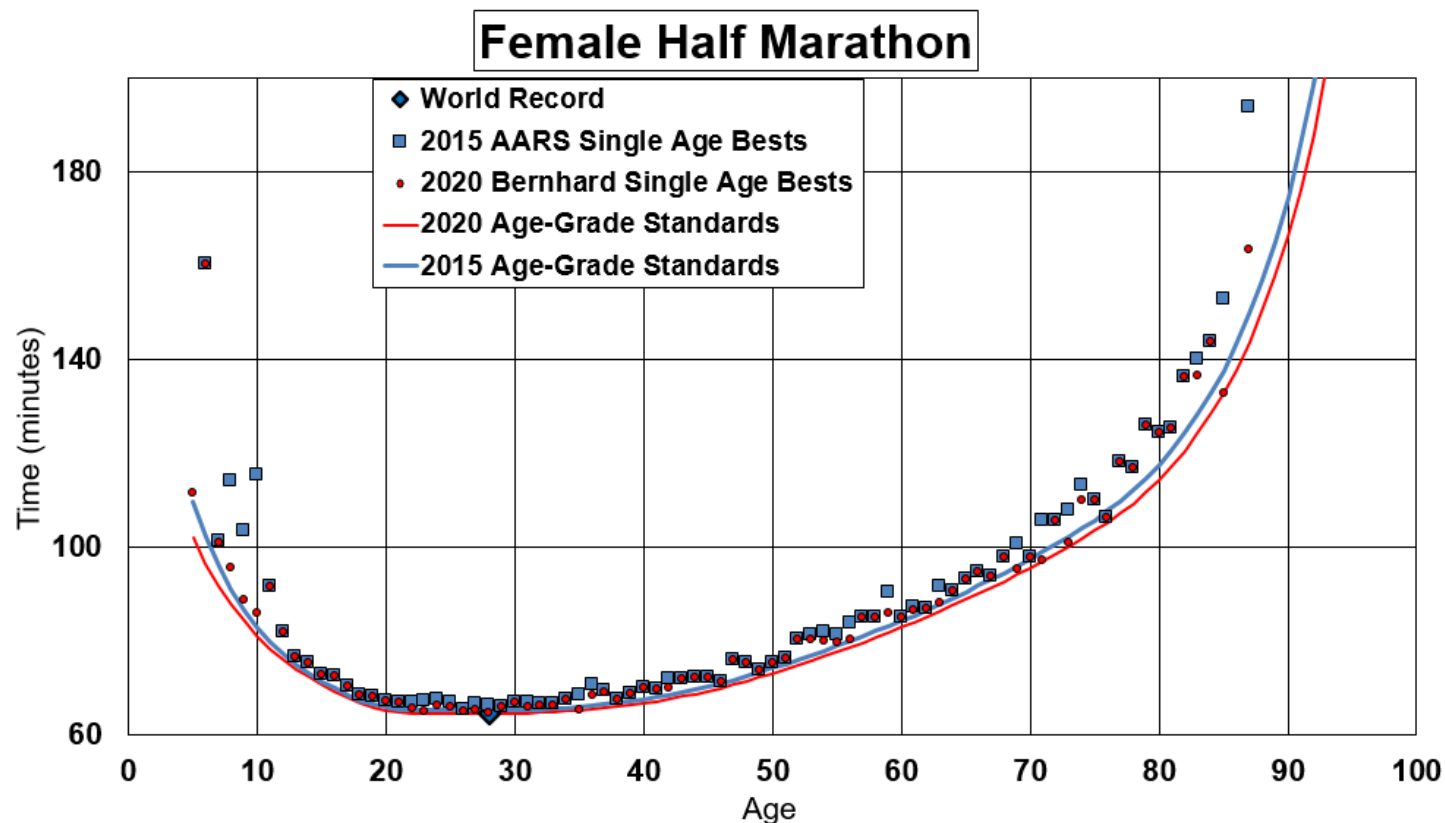

The OC has changed by 1.05%. That is the change for those in their 20s. The ages from 40 up are hurt more because of new records for ages 71 and 85.

Men Marathon

Name	Age	Time	Race	Location	Date	2015 Factors	2020 Factors	2015 Factors Place	2020 Factors Place
Bernard Lagat	44	2:12:10	Gold Coast Marathon	Gold Coast, QLD, AUS	7/6/2019	98.67%	98.03%	1	1
Abdi Abdirahman	42	2:11:34	NYC Marathon	New York, NY	11/3/2019	97.51%	96.87%	2	2
Gene Dykes	70	2:54:23	Jacksonville Marathon	Jacksonville, FL	12/15/2018	95.21%	94.71%	3	3
Gene Dykes	71	2:58:50	Boston Marathon	Boston, MA	4/15/2019	93.87%	93.36%	4	4
Abdi Abdirahman	42	2:18:56	Boston Marathon	Boston, MA	4/15/2019	92.34%	91.73%	5	5
Jacob Nur	63	2:47:57	USATF Marathon Championships	Sacramento, CA	12/2/2018	92.08%	91.56%	6	6
Dustin Sprague	44	2:23:00	Columbus Marathon	Columbus, OH	10/20/2019	91.20%	90.61%	7	7
Iain Mickle	59	2:43:18	California International Marathon	Sacramento, CA	12/8/2019	91.14%	90.60%	8	8
Michael Roda	43	2:22:37	Grandma's Marathon	Duluth, MN	6/22/2019	90.69%	90.10%	9	9
Guillermo Pineda Molales	46	2:28:42	Boston Marathon	Boston, MA	4/15/2019	89.17%	88.60%	10	10
Sam Kreig	43	2:25:58	Chicago Marathon	Chicago, IL	10/13/2019	88.61%	88.03%	11	11
Thomas Tayeri	55	2:42:13	Chicago Marathon	Chicago, IL	10/13/2019	88.42%	87.89%	12	12
Martin Keibel	68	3:04:09	Houston Marathon	Houston, TX	1/20/2019	88.30%	87.82%	13	13
Tom Clark	47	2:31:53	Boston Marathon	Boston, MA	4/15/2019	88.04%	87.48%	14	14
Jorge Maravilla	41	2:24:55	Houston Marathon	Houston, TX	1/20/2019	87.85%	87.23%	15	17

The only place change is in 15ᵗʰ place where that runner dropped to 17ᵗʰ place. This implies that the changes are rather uniform across the ages. The graph shows this.
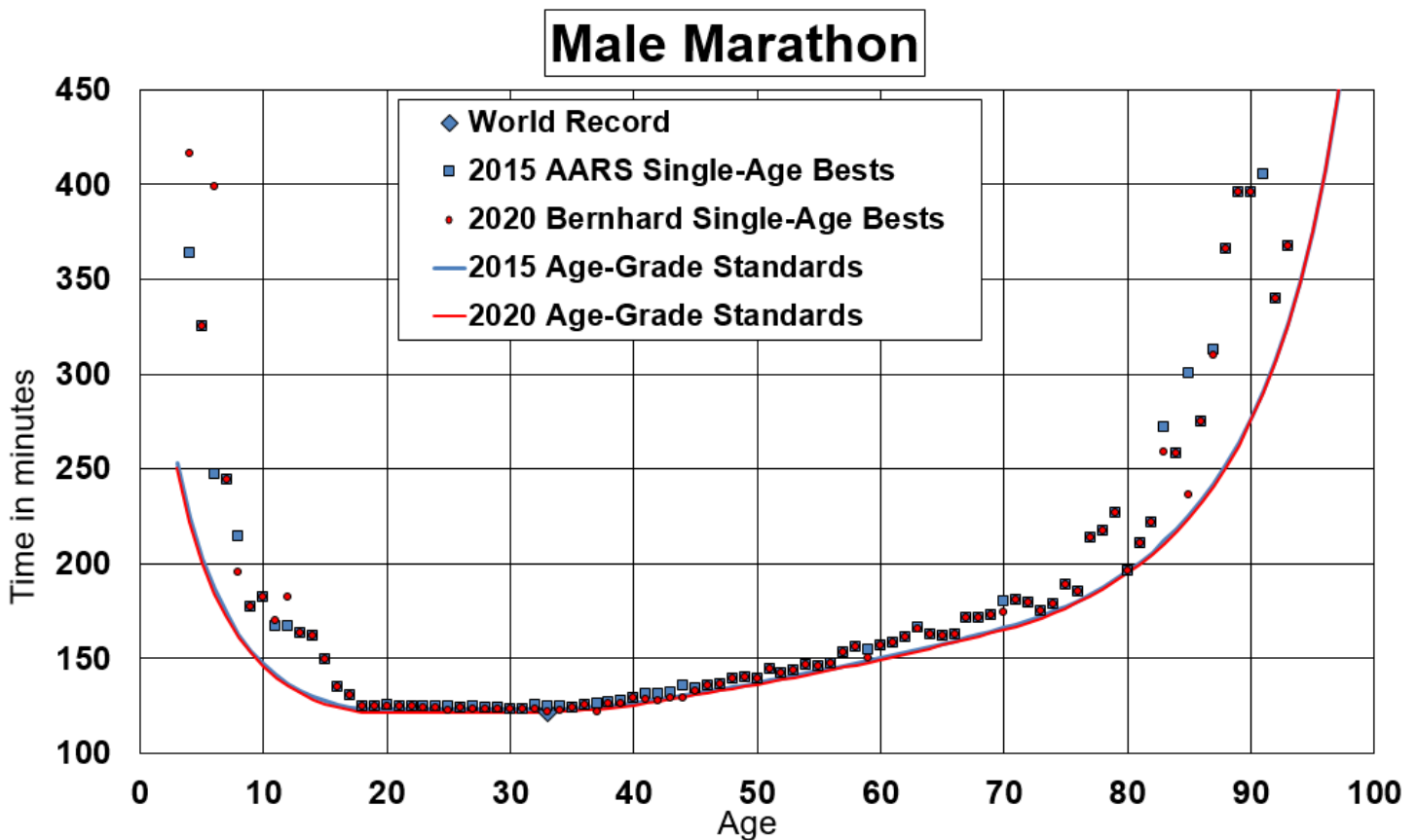

The OC changed by 1.06%. That is roughly the change from the youngest ages through age 32. Starting at age 32 the change is even less.

Women Marathon

Name	Age	Time	Race	Location	Date	2015 Factors	2020 Factors	2015 Factors Place	2020 Factors Place
Joan Samuelson	62	3:02:21	Berlin Marathon	Berlin, DE	9/29/2019	99.33%	97.44%	1	1
Jenny Hitchings	56	2:50:36	NYC Marathon	New York, NY	11/3/2019	97.56%	95.74%	2	2
Jenny Hitchings	56	2:50:50	California International Marathon	Sacramento, CA	12/8/2019	97.43%	95.61%	3	3
Joan Samuelson	61	3:04:00	Boston Marathon	Boston, MA	4/15/2019	97.02%	95.18%	4	4
Jenny Hitchings	55	2:52:03	USATF Marathon Championships	Sacramento, CA	12/2/2018	95.45%	93.67%	5	5
Susan Loken	55	2:52:09	Grandma's Marathon	Duluth, MN	6/22/2019	95.39%	93.61%	6	6
Roberta Groner	41	2:29:09	NN Marathon Rotterdam	Rotterdam, NED	4/7/2019	94.23%	92.65%	7	7
Roberta Groner	41	2:30:12	NYC Marathon	New York, NY	11/3/2019	93.57%	92%	8	8
Kate Landau	43	2:33:04	NYC Marathon	New York, NY	11/3/2019	93.23%	91.60%	9	9
Kate Landau	42	2:31:56	Boston Marathon	Boston, MA	4/15/2019	93.18%	91.58%	10	10
Perry Shoemaker	48	2:43:33	Eugene Marathon	Eugene, OR	4/28/2019	91.83%	90.15%	11	12
Jacqueline Komrij	55	2:59:01	NYC Marathon	New York, NY	11/3/2019	91.74%	90.02%	12	13
Dawn Grunnagle	41	2:33:14	Berlin Marathon	Ber, DEU	9/29/2019	91.72%	90.18%	13	11
Myung Kim	70	3:45:27	LA Marathon	Los Angeles, CA	3/24/2019	91.06%	89.29%	14	15
Dot McMahan	42	2:35:36	Monumental Marathon	Indianapolis, IN	11/9/2019	90.99%	89.43%	15	14

The only change in the last place where, using the 2015 factors, 70-year-old Myung Kim beats 42-year-old Dot McMahan but their places are reversed using the 2020 factors.

Female Marathon
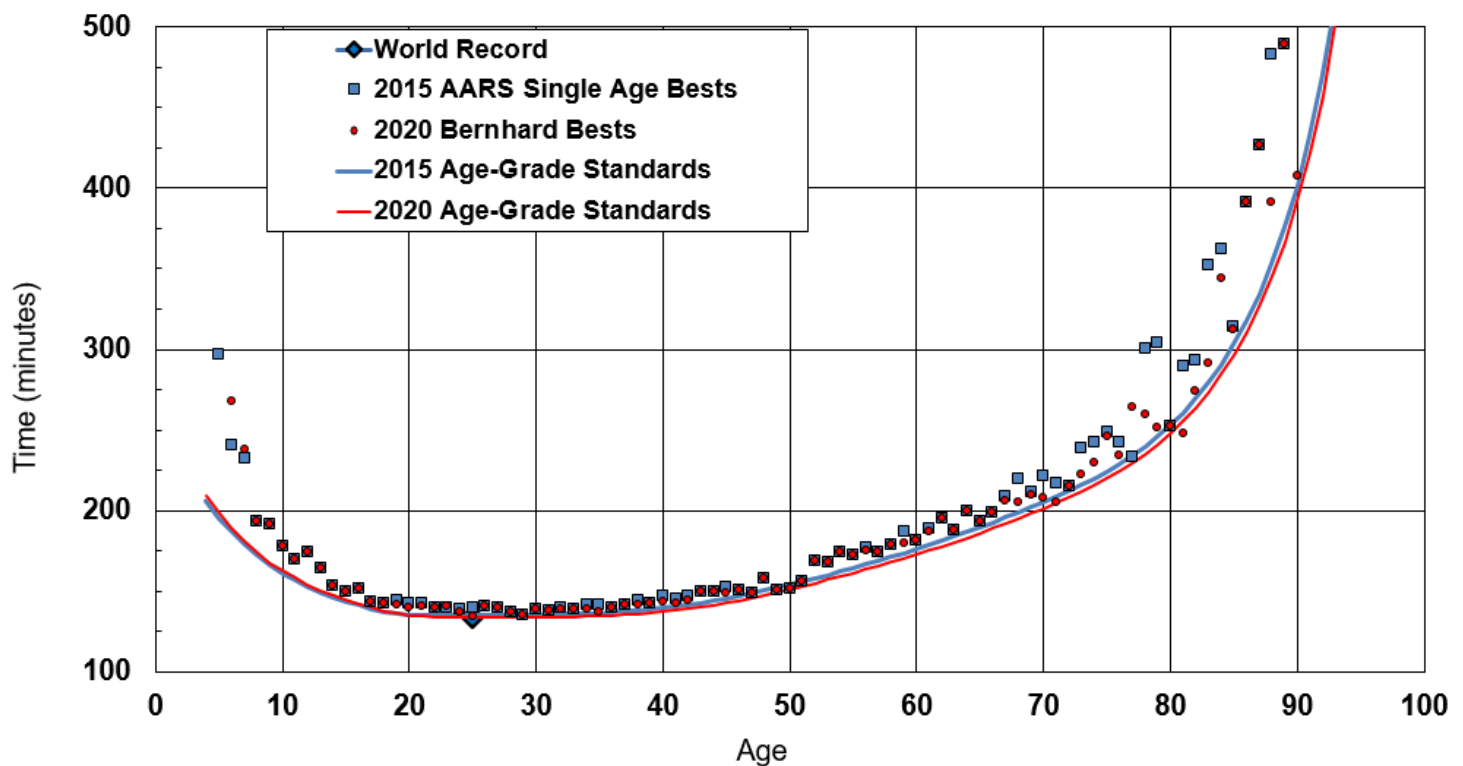
You can see that the gap between the 2015 and 2020 lines is larger for a 70-year-old than for a 42-year old giving the 70-year-old a slight disadvantage over her 42-

year-old competitor. That is why Myung Kim moved from 14th place using the 2015 standards to 15th place using the 2020 standards.

Summary

As has happened in the past when considering new standards, the changes in the female standards are greater than on the male side. However, it would result in much confusion if we were to release new female standards and keep the male standards the same. After all, there ARE changes in the male standards, and they should be recognized.