

Predicciones sobre CoViD-19

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DEPARTAMENTO DE ESTATÍSTICA,
ANÁLISE MATEMÁTICA E OPTIMIZACIÓN



- Predicciones

- Predicciones Fallecidos

3 Panorama internacional

Datos

Aplicación Shiny disponible en

<http://modestya.usc.es:3838/covid19prediction/>

Último dato Confirmados CCAA: 14/02/2021

Fuente: https://cneccovid.isciii.es/covid19/resources/casos_tecnica_ccaa.csv

Predicciones:

▶ España

► Andalucía

► Aragón

► Asturias

▶ I. Balears

▶ Canarias

► **Cantabria**

► **Cataluña**

► Castilla-La Mancha

► **Castilla y León**

► C. Valenciana

▶ Extremadura

▶ País Vasco

► Galicia

▶ Madrid

► Murcia

▶ Navarra

► La Rioja

► Mod Lineal

▶ Mod NP

► **Mod Aditivo**

	$10^2 \sigma_R^2$			$10^2 \sigma_R^2 (rob.)$			r^2		
Horiz	FLM	NP	SAM	FLM	NP	SAM	FLM	NP	SAM
H1	0.008	0.007	0.008	0.006	0.005	0.006	0.681	0.744	0.692
H2	0.034	0.02	0.032	0.019	0.016	0.019	0.684	0.825	0.703
H3	0.05	0.034	0.048	0.039	0.032	0	0.771	0.85	0.783
H4	0.072	0.054	0.069	0.064	0.053	0.061	0.81	0.863	0.819
H5	0.115	0.093	0.11	0.095	0.084	0.091	0.812	0.854	0.821

Último dato fichero: 14/02/2021.

Tabla Previsión Confirmados: Mod. Lineal.

Last=14/02/2021

	Last	IA14	IA7	H1	H2	H3	H4	H5
España	3086301	323	99	3093628	3099714	3104767	3109285	3111859
Andalucía	461658	385	126	463216	464423	465618	466731	467524
Aragón	104213	344	114	104459	104688	104883	105071	105206
Asturias	41497	295	81	41612	41716	41795	41858	41874
Canarias	38595	108	42	38730	38859	38984	39108	39212
Cantabria	23887	161	54	23935	23978	24017	24057	24081
Castilla.y.León	201710	411	116	202160	202529	202790	202995	203061
Castilla.La.Mancha	164881	303	73	165149	165329	165445	165529	165522
Cataluña	550154	278	98	551384	552549	553506	554410	555033
Ceuta	4394	404	143	4411	4427	4443	4458	4471
Comunidad.Valenciana	364782	357	76	365390	365657	365824	365882	365659
Extremadura	68237	187	54	68351	68436	68492	68535	68547
Galicia	108111	263	74	108397	108629	108810	108951	108984
Islas.Baleares	55093	166	45	55196	55297	55364	55424	55459
La.Rioja	27194	262	53	27234	27259	27271	27278	27270
Madrid	563997	431	141	565456	566789	567882	568884	569537
Melilla	6646	457	141	6665	6683	6696	6708	6716
Murcia	104728	217	57	104910	105058	105148	105215	105229
Navarra	50532	219	63	50607	50668	50724	50783	50821
País.Vasco	145992	339	115	146376	146744	147066	147374	147591

Cuadro: Previsión Confirmados: Mod. Lineal - Horizonte 1 – 5 días.

Tabla Previsión Confirmados: Mod. Aditivo.

Last=14/02/2021

	Last	IA14	IA7	H1	H2	H3	H4	H5
España	3086301	323	99	3093823	3099856	3108208	3114692	3118422
Andalucía	461658	385	126	463512	464698	466791	468531	469743
Aragón	104213	344	114	104411	104657	104887	105050	105215
Asturias	41497	295	81	41634	41815	41948	42041	42108
Canarias	38595	108	42	38721	38849	38981	39091	39206
Cantabria	23887	161	54	23922	23964	24012	24047	24080
Castilla.y.León	201710	411	116	202218	202633	203163	203532	203689
Castilla.La.Mancha	164881	303	73	165197	165395	165701	165915	165941
Cataluña	550154	278	98	551169	552228	553355	554133	554856
Ceuta	4394	404	143	4410	4439	4453	4464	4479
Comunidad.Valenciana	364782	357	76	365869	366305	367339	367877	368096
Extremadura	68237	187	54	68369	68424	68513	68587	68580
Galicia	108111	263	74	108471	108776	109156	109420	109581
Islas.Baleares	55093	166	45	55165	55288	55372	55414	55462
La.Rioja	27194	262	53	27246	27274	27314	27342	27335
Madrid	563997	431	141	565351	566811	568317	569428	570301
Melilla	6646	457	141	6664	6690	6708	6721	6732
Murcia	104728	217	57	104920	105050	105207	105317	105325
Navarra	50532	219	63	50573	50627	50693	50733	50782
País.Vasco	145992	339	115	146313	146799	147166	147425	147708

Cuadro: Previsión Confirmados: Mod. Aditivo - Horizonte 1 – 5 días.

Tabla Ratio Incr. Confirmados: Mod. Lineal.

Last=14/02/2021

	Last	H1	H2	H3	H4	H5
España	0.0030	0.0020	0.0040	0.0060	0.0070	0.0080
Andalucía	0.0040	0.0030	0.0060	0.0090	0.0110	0.0130
Aragón	0.0020	0.0020	0.0050	0.0060	0.0080	0.0100
Asturias	0.0040	0.0030	0.0050	0.0070	0.0090	0.0090
Canarias	0.0040	0.0030	0.0070	0.0100	0.0130	0.0160
Cantabria	0.0020	0.0020	0.0040	0.0050	0.0070	0.0080
Castilla.y.León	0.0030	0.0020	0.0040	0.0050	0.0060	0.0070
Castilla.La.Mancha	0.0020	0.0020	0.0030	0.0030	0.0040	0.0040
Cataluña	0.0020	0.0020	0.0040	0.0060	0.0080	0.0090
Ceuta	0.0050	0.0040	0.0080	0.0110	0.0150	0.0170
Comunidad.Valenciana	0.0020	0.0020	0.0020	0.0030	0.0030	0.0020
Extremadura	0.0020	0.0020	0.0030	0.0040	0.0040	0.0050
Galicia	0.0040	0.0030	0.0050	0.0060	0.0080	0.0080
Islas.Baleares	0.0020	0.0020	0.0040	0.0050	0.0060	0.0070
La.Rioja	0.0010	0.0010	0.0020	0.0030	0.0030	0.0030
Madrid	0.0030	0.0030	0.0050	0.0070	0.0090	0.0100
Melilla	0.0030	0.0030	0.0060	0.0080	0.0090	0.0100
Murcia	0.0020	0.0020	0.0030	0.0040	0.0050	0.0050
Navarra	0.0020	0.0010	0.0030	0.0040	0.0050	0.0060
País.Vasco	0.0030	0.0030	0.0050	0.0070	0.0090	0.0110

Cuadro: Previsión Ratio Incr. Confirmados: Mod. lineal - Horizonte 1 – 5 días.

Tabla Ratio Incr. Confirmados: Mod. No Paramétrico.

Last=14/02/2021

	Last	H1	H2	H3	H4	H5
España	0.003	0.005	0.009	0.013	0.018	0.022
Andalucía	0.004	0.006	0.012	0.017	0.023	0.028
Aragón	0.002	0.004	0.008	0.012	0.015	0.019
Asturias	0.004	0.006	0.012	0.017	0.023	0.028
Canarias	0.004	0.005	0.010	0.014	0.019	0.024
Cantabria	0.002	0.004	0.007	0.011	0.015	0.018
Castilla.y.León	0.003	0.005	0.009	0.013	0.018	0.022
Castilla.La.Mancha	0.002	0.004	0.008	0.012	0.016	0.019
Cataluña	0.002	0.004	0.007	0.011	0.014	0.018
Ceuta	0.005	0.006	0.011	0.017	0.023	0.028
Comunidad.Valenciana	0.002	0.005	0.010	0.014	0.019	0.023
Extremadura	0.002	0.004	0.007	0.010	0.014	0.017
Galicia	0.004	0.006	0.011	0.016	0.022	0.027
Islas.Baleares	0.002	0.003	0.007	0.010	0.013	0.016
La.Rioja	0.001	0.004	0.007	0.011	0.014	0.018
Madrid	0.003	0.005	0.009	0.013	0.018	0.022
Melilla	0.003	0.005	0.010	0.015	0.019	0.024
Murcia	0.002	0.004	0.007	0.011	0.014	0.017
Navarra	0.002	0.003	0.006	0.009	0.012	0.015
País.Vasco	0.003	0.004	0.009	0.013	0.017	0.021

Cuadro: Previsión Ratio Incr. Confirmados: Mod. No Paramétrico - Horizonte 1 – 5 días.

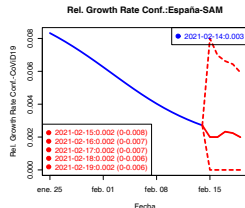
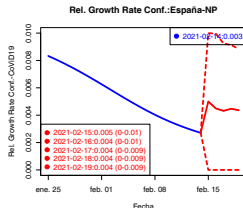
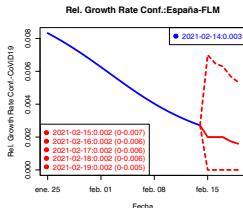
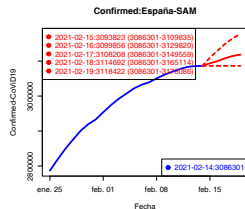
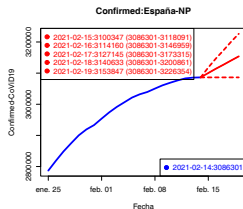
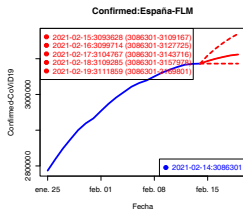
Tabla Ratio Incr. Confirmados: Mod. Aditivo.

Last=14/02/2021

	Last	H1	H2	H3	H4	H5
España	0.003	0.002	0.004	0.007	0.009	0.010
Andalucía	0.004	0.004	0.007	0.011	0.015	0.018
Aragón	0.002	0.002	0.004	0.006	0.008	0.010
Asturias	0.004	0.003	0.008	0.011	0.013	0.015
Canarias	0.004	0.003	0.007	0.010	0.013	0.016
Cantabria	0.002	0.001	0.003	0.005	0.007	0.008
Castilla.y.León	0.003	0.003	0.005	0.007	0.009	0.010
Castilla.La.Mancha	0.002	0.002	0.003	0.005	0.006	0.006
Cataluña	0.002	0.002	0.004	0.006	0.007	0.009
Ceuta	0.005	0.004	0.010	0.013	0.016	0.019
Comunidad.Valenciana	0.002	0.003	0.004	0.007	0.008	0.009
Extremadura	0.002	0.002	0.003	0.004	0.005	0.005
Galicia	0.004	0.003	0.006	0.010	0.012	0.014
Islas.Baleares	0.002	0.001	0.004	0.005	0.006	0.007
La.Rioja	0.001	0.002	0.003	0.004	0.005	0.005
Madrid	0.003	0.002	0.005	0.008	0.010	0.011
Melilla	0.003	0.003	0.007	0.009	0.011	0.013
Murcia	0.002	0.002	0.003	0.005	0.006	0.006
Navarra	0.002	0.001	0.002	0.003	0.004	0.005
País.Vasco	0.003	0.002	0.006	0.008	0.010	0.012

Cuadro: Previsión Ratio Incr. Confirmados: Mod. Aditivo - Horizonte 1 – 5 días.

Confirmados: España



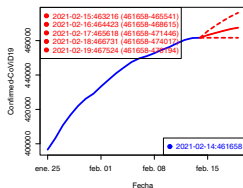
Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

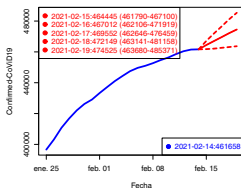
◀ Fallecidos

Confirmados: Andalucía

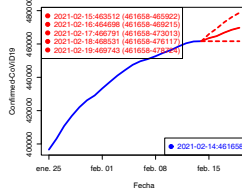
Confirmed:Andalucía-FLM



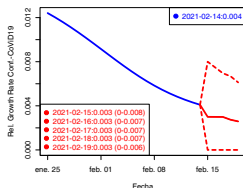
Confirmed:Andalucía-NP



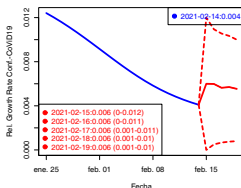
Confirmed:Andalucía-SAM



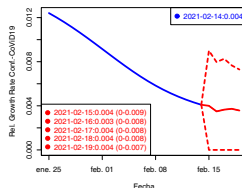
Rel. Growth Rate Conf.:Andalucía-FLM



Rel. Growth Rate Conf.:Andalucía-NP



Rel. Growth Rate Conf.:Andalucía-SAM

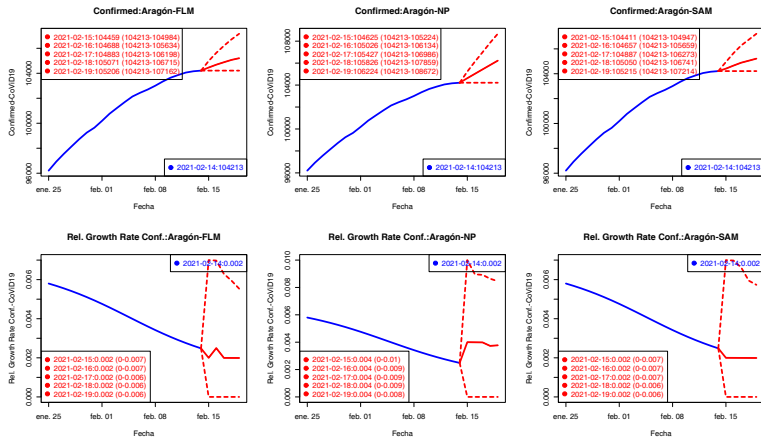


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Aragón

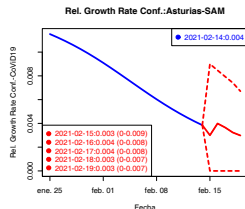
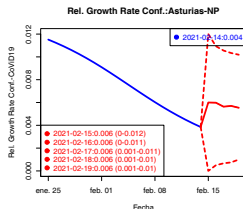
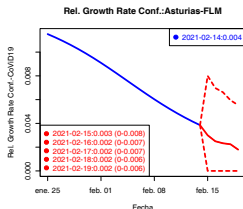
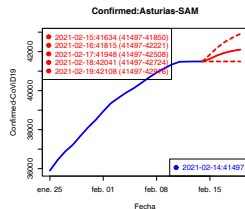
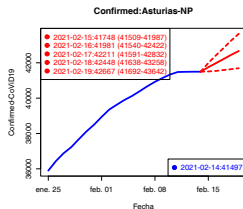
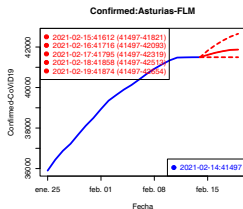


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Asturias

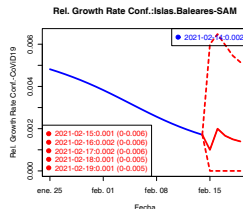
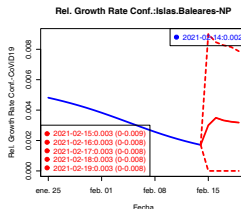
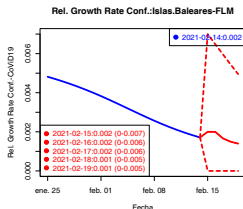
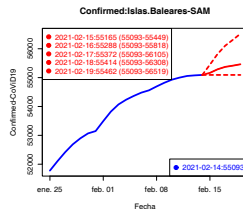
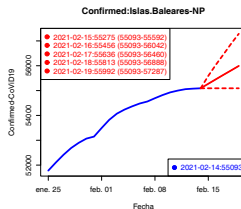
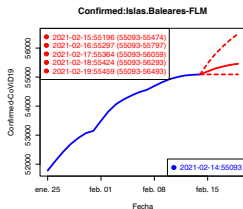


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Islas Baleares

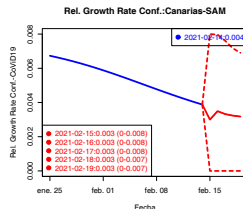
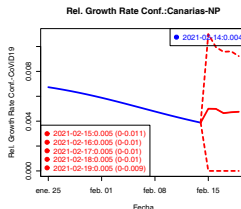
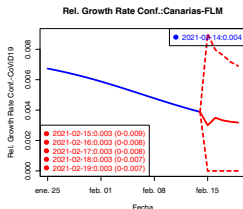
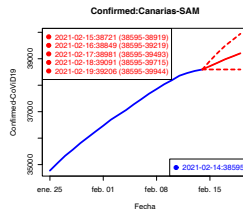
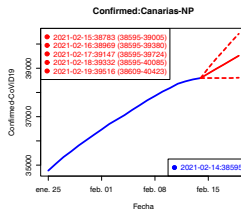
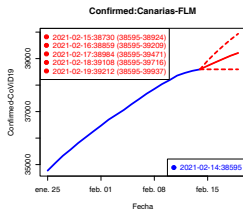


Los valores del Ratio de incremento de H2—H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Canarias

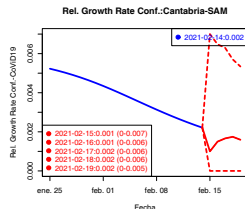
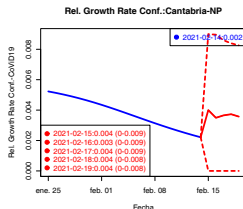
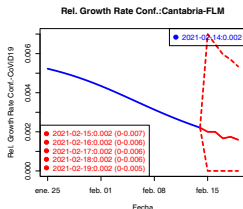
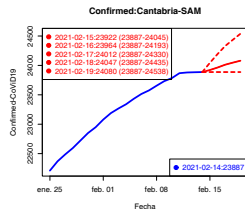
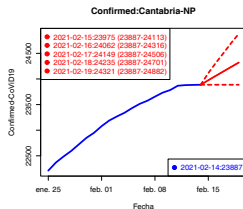
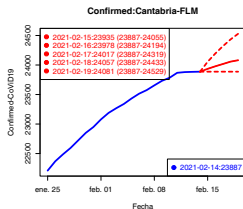


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Cantabria

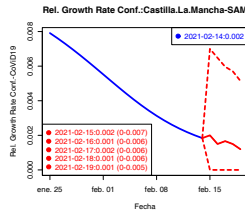
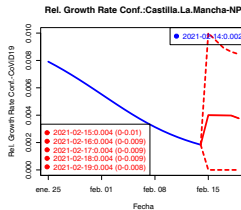
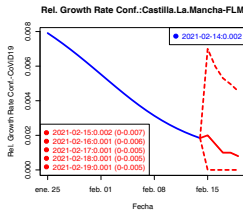
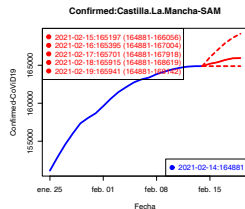
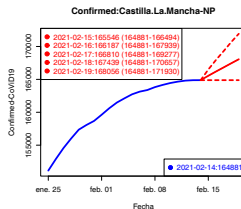
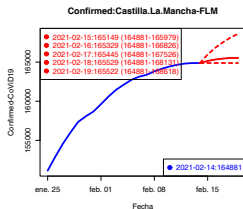


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Castilla-La Mancha



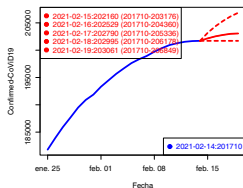
Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

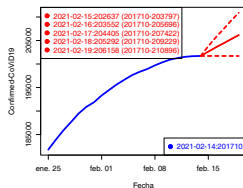
◀ Fallecidos

Confirmados: Castilla y León

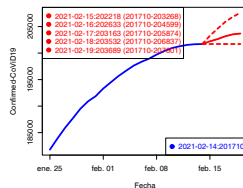
Confirmed:Castilla.y.León-FLM



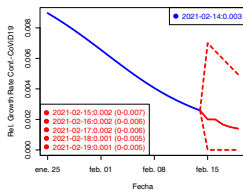
Confirmed:Castilla.y.León-NP



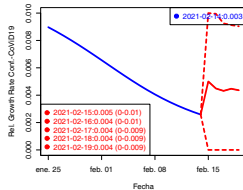
Confirmed:Castilla.y.León-SAM



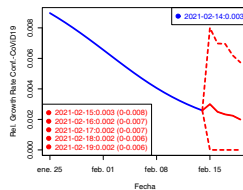
Rel. Growth Rate Conf.:Castilla.y.León-FLM



Rel. Growth Rate Conf.:Castilla.y.León-NP



Rel. Growth Rate Conf.:Castilla.y.León-SAM

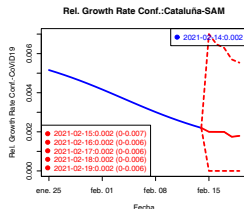
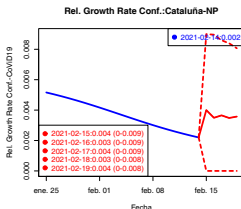
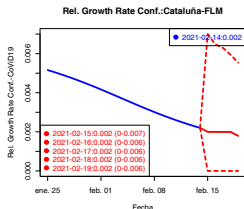
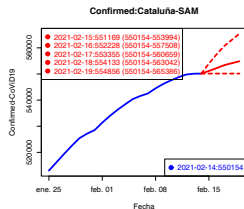
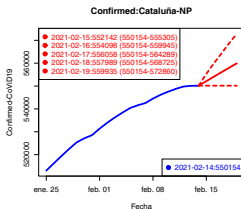
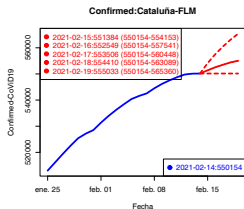


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Cataluña

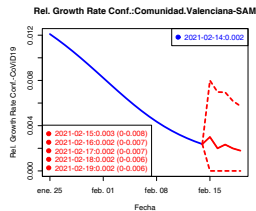
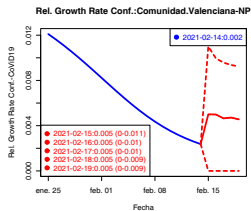
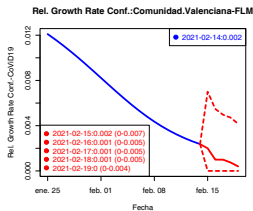
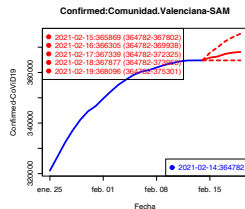
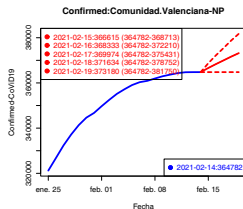
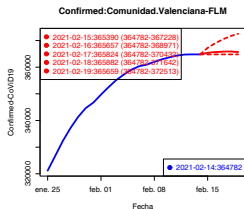


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

← Confirmados

← Fallecidos

Confirmados: C. Valenciana

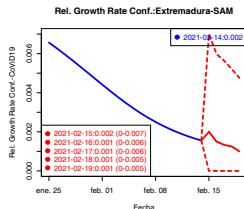
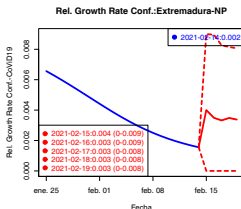
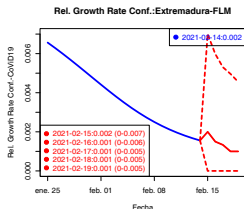
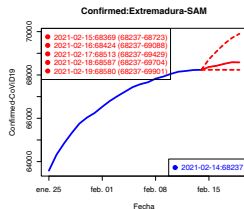
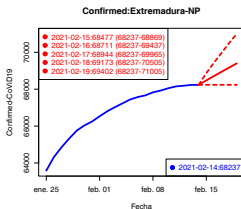
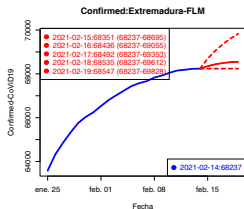


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Extremadura

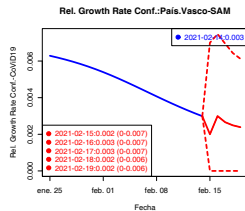
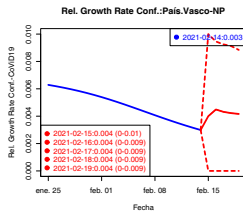
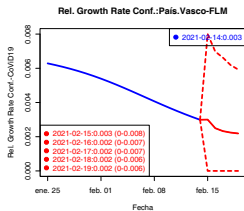
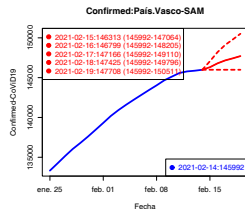
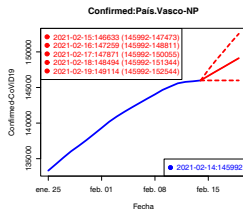
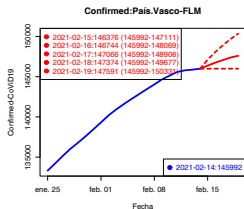


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: País Vasco

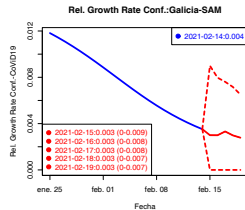
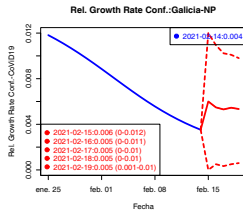
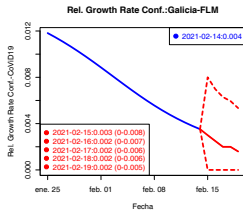
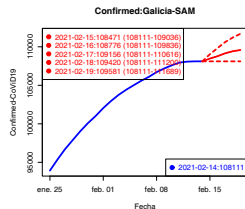
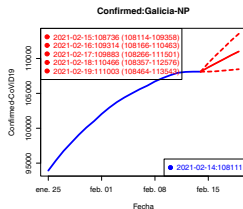
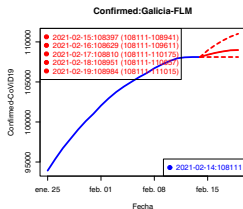


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Galicia

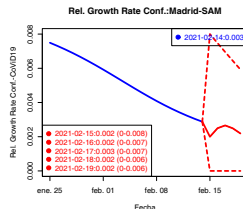
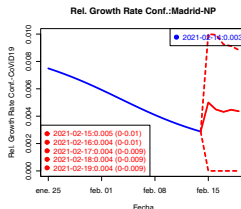
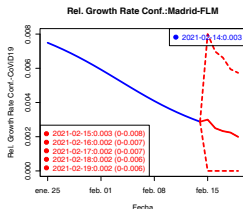
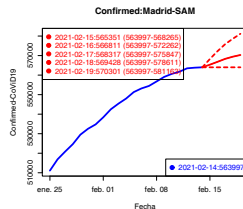
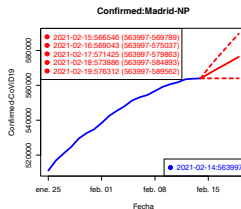
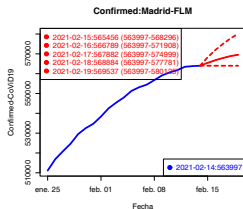


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Madrid

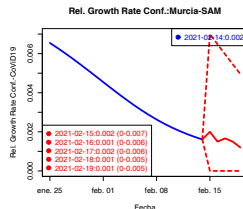
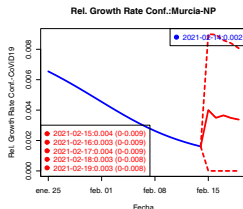
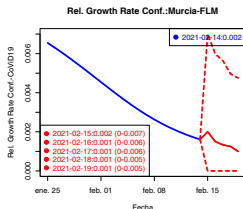
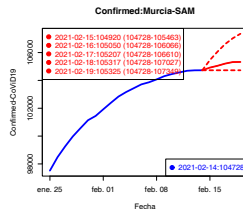
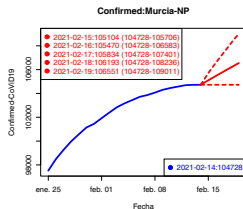
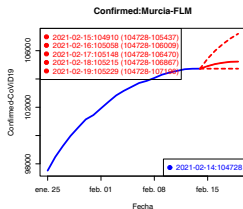


Los valores del Ratio de incremento de H2—H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Murcia

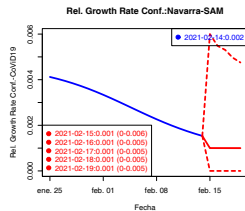
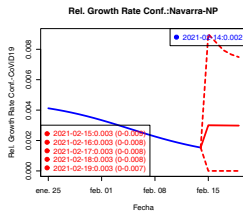
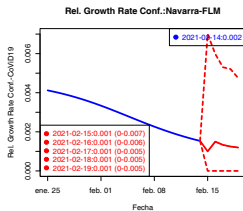
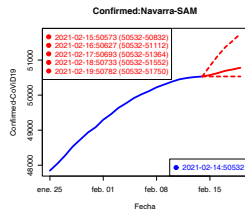
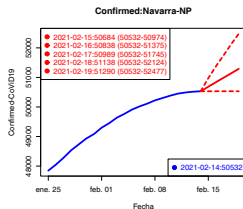
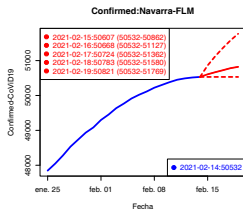


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

← Confirmados

← Fallecidos

Confirmados: Navarra

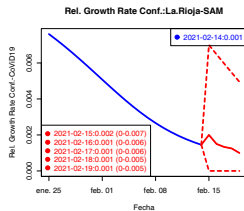
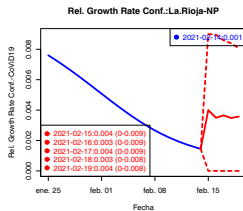
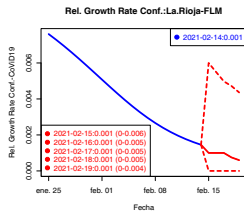
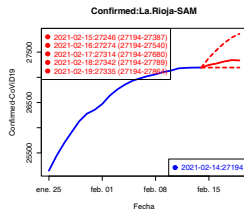
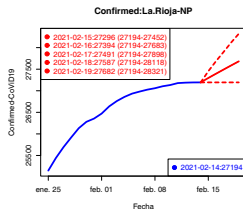
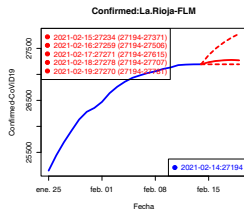


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: La Rioja



Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

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- 1 Casos Confirmados
 - Predicciones
- 2 Fallecidos
 - Predicciones Fallecidos
- 3 Panorama internacional

Modelos para fallecidos por CoViD-19

Último dato: 14/02/2021 Fuente: https://cnecovid.isciii.es/covid19/resources/casos_hosp_uci_def_sexo_edad_provres.csv

Predicciones:

▶ España

▶ Andalucía

▶ Aragón

▶ Asturias

▶ I. Baleares

▶ Canarias

▶ Cantabria

▶ Castilla-La Mancha

▶ Castilla y León

▶ Cataluña

▶ C. Valenciana

▶ Extremadura

▶ País Vasco

▶ Galicia

▶ Madrid

▶ Murcia

▶ Navarra

▶ La Rioja

▶ Mod Lineal

▶ Mod NP

▶ Mod Aditivo

	$10^2 \sigma_R^2$			$10^2 \sigma_R^2(rob.)$			r^2		
Horiz	FLM	NP	SAM	FLM	NP	SAM	FLM	NP	SAM
H1	0.003	0.004	0.003	0.002	0.002	0.002	0.658	0.631	0.676
H2	0.011	0.012	0.01	0.006	0.007	0.005	0.708	0.674	0.723
H3	0.03	0.033	0.03	0.01	0.014	0.009	0.668	0.638	0.677
H4	0.034	0.04	0.033	0.015	0.022	0.012	0.763	0.725	0.771
H5	0.045	0.054	0.043	0.02	0.031	0.017	0.798	0.757	0.804

Tabla Previsión Fallecidos: Mod. Lineal.

Last=14/02/2021

	Last	H1	H2	H3	H4	H5
España	65069	65248	65399	65579	65688	65755
Andalucía	7530	7561	7586	7617	7640	7654
Aragón	3132	3142	3152	3163	3170	3176
Asturias	1665	1673	1679	1687	1694	1700
Canarias	555	557	559	561	563	565
Cantabria	486	487	488	489	489	490
Castilla.y.León	6094	6112	6127	6147	6158	6165
Castilla.La.Mancha	5383	5396	5406	5420	5427	5430
Cataluña	9762	9774	9783	9796	9800	9801
Ceuta	76	76	76	76	76	77
Comunidad.Valenciana	5907	5939	5968	5991	6009	6017
Extremadura	1640	1648	1656	1662	1667	1669
Galicia	2086	2100	2112	2129	2141	2153
Islas.Baleares	668	669	670	672	673	674
La.Rioja	706	709	711	714	717	719
Madrid	13344	13358	13364	13376	13377	13371
Melilla	62	63	63	64	65	66
Murcia	1326	1333	1339	1343	1347	1349
Navarra	1080	1083	1086	1089	1091	1092
País.Vasco	3567	3572	3575	3581	3583	3582

Cuadro: Previsión fallecidos: Mod. lineal - Horizonte 1 – 5 días.

Tabla Previsión Fallecidos: Mod. No Paramétrico.

Last=14/02/2021

	Last	H1	H2	H3	H4	H5
España	65069	65385	65698	66043	66349	66658
Andalucía	7530	7587	7645	7701	7756	7812
Aragón	3132	3146	3159	3174	3187	3201
Asturias	1665	1673	1681	1690	1698	1706
Canarias	555	557	560	562	565	567
Cantabria	486	488	489	491	493	495
Castilla.y.León	6094	6121	6147	6177	6203	6230
Castilla.La.Mancha	5383	5409	5435	5463	5488	5514
Cataluña	9762	9786	9810	9836	9861	9889
Ceuta	76	76	77	77	77	78
Comunidad.Valenciana	5907	5961	6017	6072	6125	6177
Extremadura	1640	1652	1663	1675	1686	1697
Galicia	2086	2105	2124	2144	2162	2181
Islas.Baleares	668	671	675	678	682	685
La.Rioja	706	710	713	717	720	724
Madrid	13344	13383	13421	13464	13503	13546
Melilla	62	63	63	64	64	65
Murcia	1326	1339	1352	1365	1378	1390
Navarra	1080	1084	1087	1091	1094	1098
País.Vasco	3567	3579	3591	3605	3617	3630

Cuadro: Previsión fallecidos: Mod. No Paramétrico - Horizonte 1 – 5 días.

Tabla Previsión Fallecidos: Mod. Aditivo.

Last=14/02/2021

	Last	H1	H2	H3	H4	H5
España	65069	65198	65249	65692	65799	65741
Andalucía	7530	7558	7588	7621	7632	7671
Aragón	3132	3140	3147	3169	3177	3179
Asturias	1665	1671	1677	1691	1696	1698
Canarias	555	557	559	562	564	565
Cantabria	486	487	487	489	490	490
Castilla.y.León	6094	6105	6115	6162	6170	6163
Castilla.La.Mancha	5383	5391	5395	5432	5438	5431
Cataluña	9762	9767	9765	9797	9797	9794
Ceuta	76	76	76	76	77	77
Comunidad.Valenciana	5907	5940	5977	6001	6017	6039
Extremadura	1640	1649	1656	1661	1667	1674
Galicia	2086	2096	2111	2129	2136	2153
Islas.Baleares	668	669	670	673	675	675
La.Rioja	706	709	710	716	718	719
Madrid	13344	13344	13344	13381	13379	13352
Melilla	62	62	63	64	65	65
Murcia	1326	1333	1340	1347	1353	1358
Navarra	1080	1082	1084	1088	1089	1091
País.Vasco	3567	3568	3568	3588	3591	3584

Cuadro: Previsión fallecidos: Mod. Aditivo - Horizonte 1 – 5 días.

Tabla Ratio Incr. Fallecidos: Mod. Lineal.

Last=14/02/2021

	Last	H1	H2	H3	H4	H5
España	0.003	0.003	0.005	0.008	0.010	0.011
Andalucía	0.006	0.004	0.007	0.012	0.015	0.016
Aragón	0.003	0.003	0.006	0.010	0.012	0.014
Asturias	0.005	0.005	0.009	0.013	0.017	0.021
Canarias	0.004	0.004	0.008	0.011	0.015	0.018
Cantabria	0.003	0.002	0.003	0.006	0.007	0.009
Castilla.y.León	0.003	0.003	0.005	0.009	0.011	0.012
Castilla.La.Mancha	0.003	0.002	0.004	0.007	0.008	0.009
Cataluña	0.001	0.001	0.002	0.003	0.004	0.004
Ceuta	0.003	0.002	0.002	0.003	0.005	0.007
Comunidad.Valenciana	0.007	0.005	0.010	0.014	0.017	0.019
Extremadura	0.006	0.005	0.010	0.013	0.016	0.018
Galicia	0.009	0.007	0.013	0.020	0.026	0.032
Islas.Baleares	0.003	0.002	0.004	0.006	0.008	0.009
La.Rioja	0.005	0.004	0.007	0.012	0.015	0.018
Madrid	0.001	0.001	0.002	0.002	0.002	0.002
Melilla	0.012	0.011	0.024	0.038	0.047	0.056
Murcia	0.007	0.005	0.010	0.013	0.016	0.017
Navarra	0.002	0.003	0.006	0.008	0.010	0.011
País.Vasco	0.001	0.001	0.002	0.004	0.004	0.004

Cuadro: Previsión Ratio Incr. Fallecidos: Mod. lineal - Horizonte 1 – 5 días.

Tabla Ratio Incr. Fallecidos: Mod. No Paramétrico.

Last=14/02/2021

	Last	H1	H2	H3	H4	H5
España	0.003	0.005	0.010	0.015	0.020	0.024
Andalucía	0.006	0.008	0.015	0.023	0.030	0.037
Aragón	0.003	0.004	0.009	0.013	0.018	0.022
Asturias	0.005	0.005	0.010	0.015	0.020	0.025
Canarias	0.004	0.004	0.008	0.013	0.017	0.022
Cantabria	0.003	0.004	0.007	0.011	0.015	0.019
Castilla.y.León	0.003	0.004	0.009	0.014	0.018	0.022
Castilla.La.Mancha	0.003	0.005	0.010	0.015	0.020	0.024
Cataluña	0.001	0.003	0.005	0.008	0.010	0.013
Ceuta	0.003	0.005	0.010	0.015	0.019	0.024
Comunidad.Valenciana	0.007	0.009	0.019	0.028	0.037	0.046
Extremadura	0.006	0.007	0.014	0.021	0.028	0.035
Galicia	0.009	0.009	0.018	0.028	0.037	0.046
Islas.Baleares	0.003	0.005	0.010	0.016	0.021	0.026
La.Rioja	0.005	0.005	0.010	0.016	0.020	0.025
Madrid	0.001	0.003	0.006	0.009	0.012	0.015
Melilla	0.012	0.010	0.020	0.030	0.039	0.049
Murcia	0.007	0.010	0.020	0.030	0.039	0.048
Navarra	0.002	0.003	0.006	0.010	0.013	0.017
País.Vasco	0.001	0.003	0.007	0.011	0.014	0.018

Cuadro: Previsión Ratio Incr. Fallecidos: Mod. No Paramétrico - Horizonte 1 – 5 días.

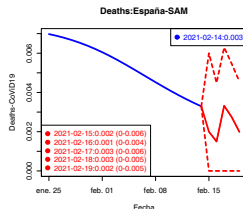
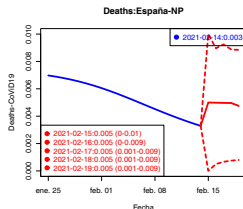
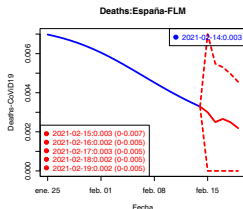
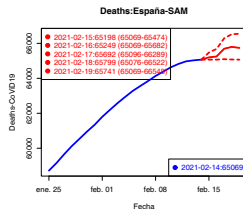
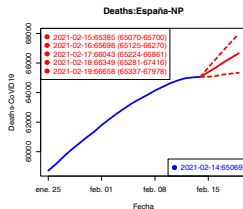
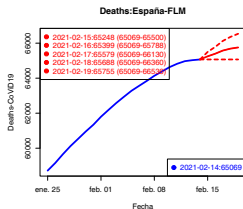
Tabla Ratio Incr. Fallecidos: Mod. Aditivo.

Last=14/02/2021

	Last	H1	H2	H3	H4	H5
España	0.003	0.002	0.003	0.010	0.011	0.010
Andalucía	0.006	0.004	0.008	0.012	0.014	0.019
Aragón	0.003	0.003	0.005	0.012	0.014	0.015
Asturias	0.005	0.004	0.007	0.015	0.018	0.020
Canarias	0.004	0.004	0.007	0.013	0.016	0.018
Cantabria	0.003	0.001	0.002	0.007	0.008	0.009
Castilla.y.León	0.003	0.002	0.003	0.011	0.012	0.011
Castilla.La.Mancha	0.003	0.002	0.002	0.009	0.010	0.009
Cataluña	0.001	0.000	0.000	0.004	0.004	0.003
Ceuta	0.003	0.002	0.002	0.006	0.008	0.009
Comunidad.Valenciana	0.007	0.006	0.012	0.016	0.019	0.022
Extremadura	0.006	0.005	0.010	0.013	0.016	0.020
Galicia	0.009	0.005	0.012	0.021	0.024	0.032
Islas.Baleares	0.003	0.002	0.003	0.008	0.010	0.011
La.Rioja	0.005	0.004	0.006	0.014	0.017	0.019
Madrid	0.001	0.000	0.000	0.003	0.003	0.001
Melilla	0.012	0.008	0.020	0.039	0.046	0.053
Murcia	0.007	0.006	0.011	0.016	0.020	0.024
Navarra	0.002	0.002	0.003	0.007	0.008	0.010
País.Vasco	0.001	0.000	0.000	0.006	0.007	0.005

Cuadro: Previsión Ratio Incr. Fallecidos: Mod. Aditivo - Horizonte 1 – 5 días.

Fallecidos: España

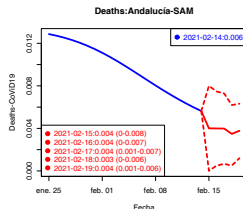
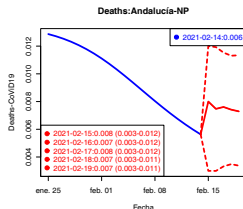
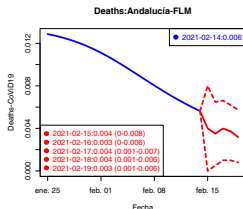
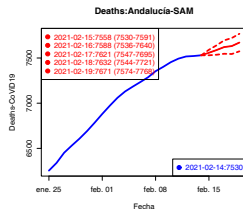
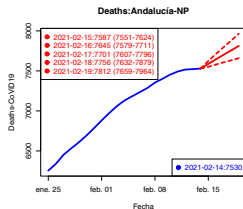
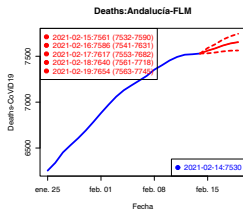


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Andalucía

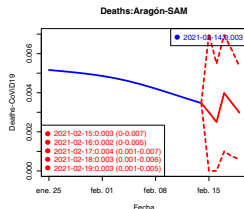
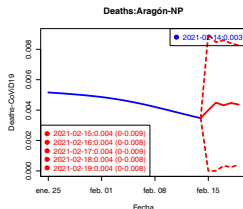
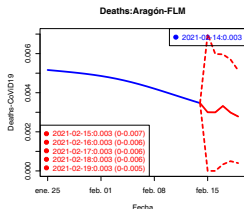
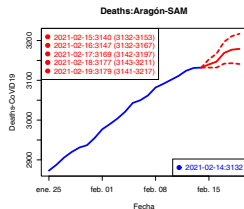
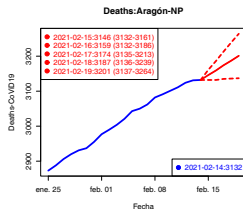
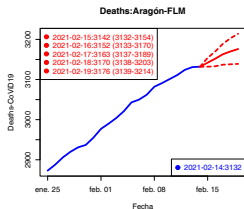


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

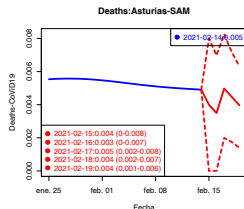
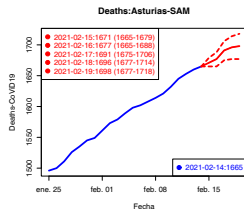
◀ Confirmados

◀ Fallecidos

Fallecidos: Aragón

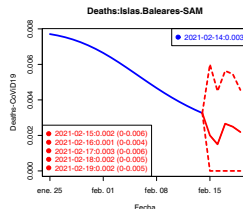
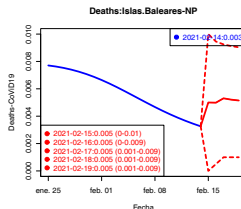
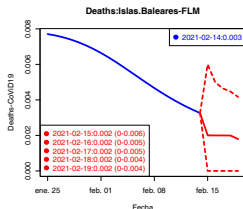
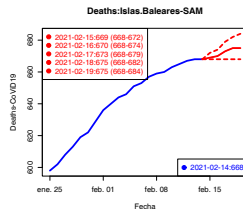
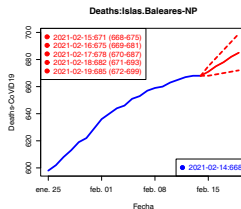
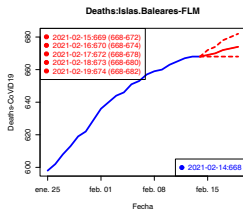


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.



◀ Confirmados ◀ Fallecidos

Fallecidos: Islas Baleares

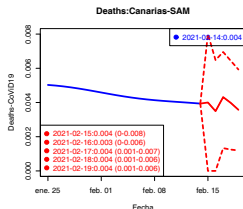
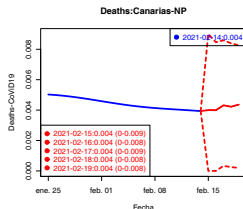
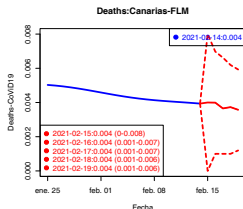
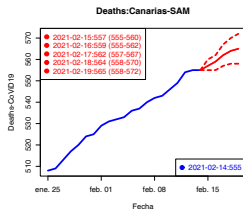
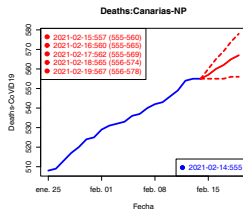
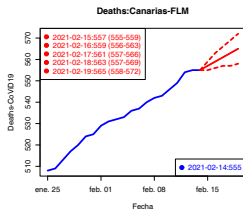


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Canarias

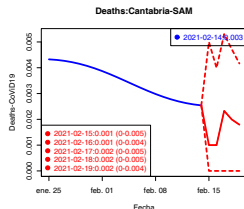
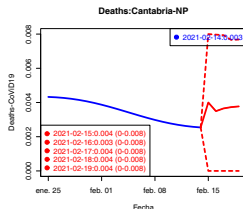
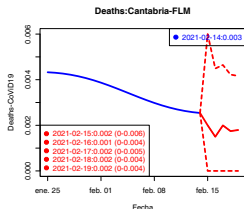
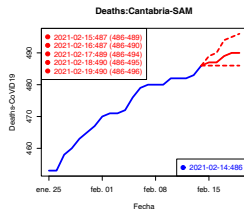
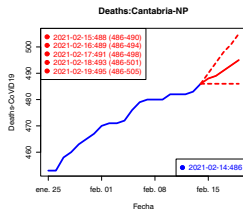
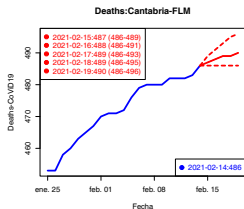


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Cantabria

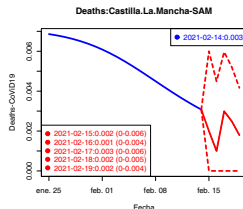
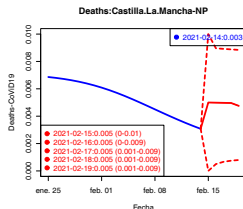
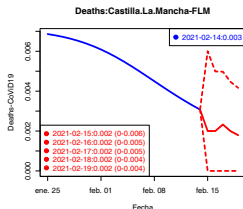
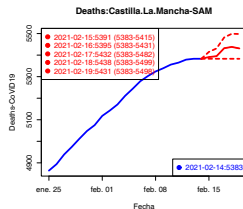
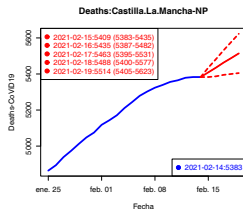
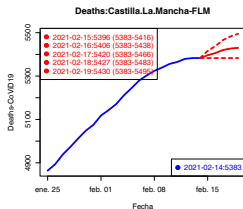


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Castilla-La Mancha

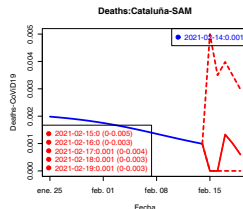
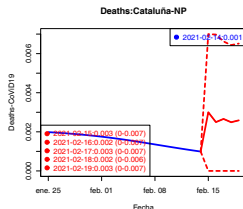
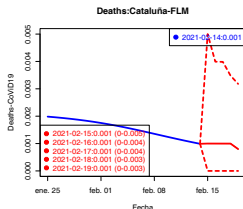
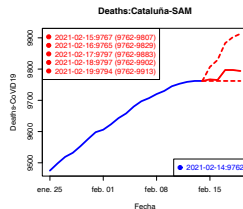
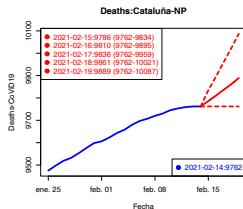
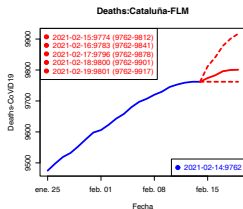


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Cataluña

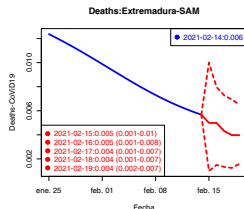
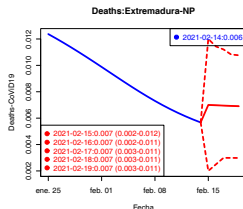
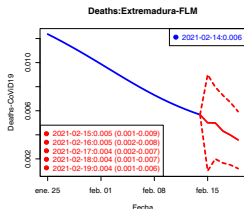
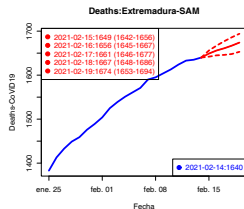
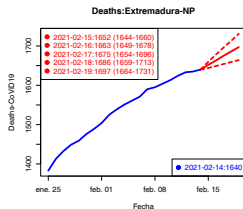
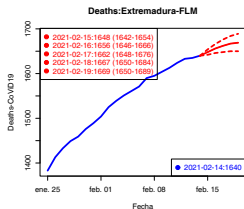


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Extremadura

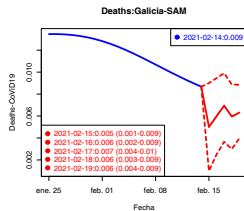
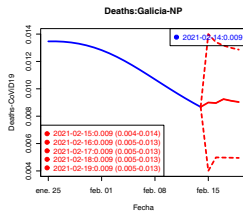
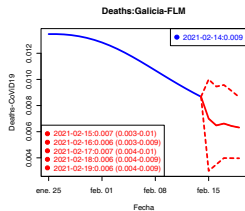
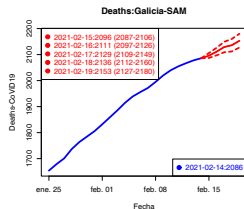
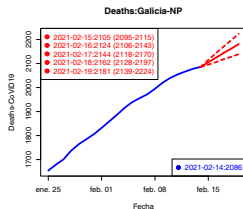
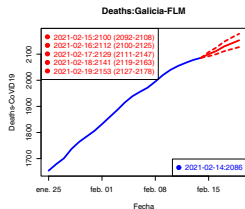


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Galicia

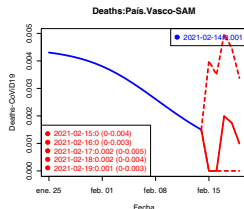
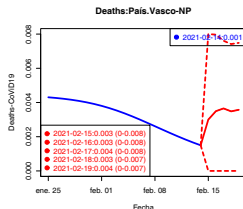
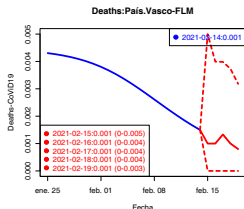
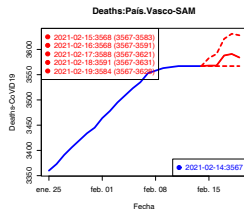
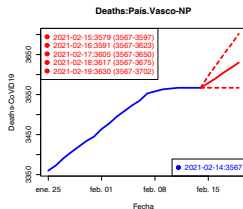
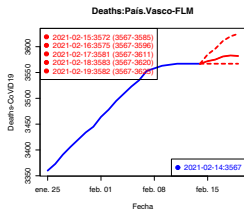


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

← Confirmados

← Fallecidos

Fallecidos: País Vasco

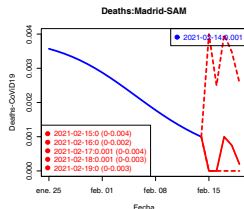
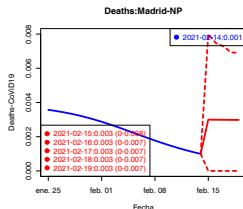
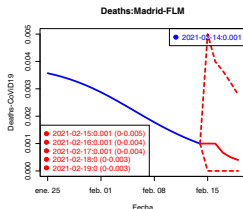
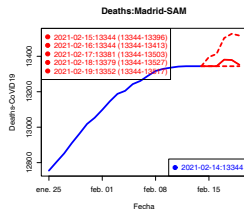
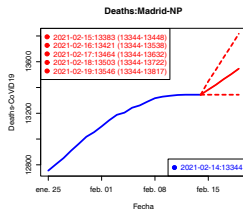
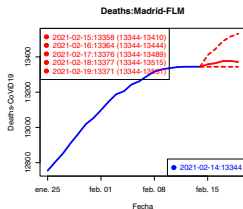


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Madrid

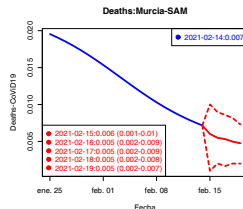
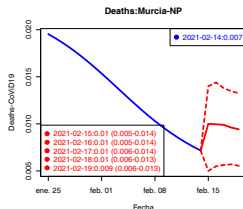
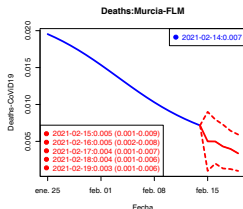
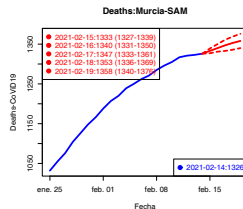
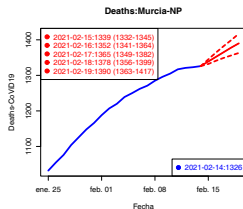
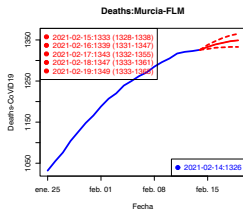


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Murcia



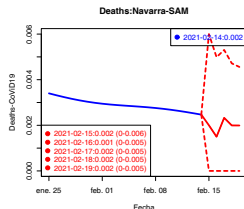
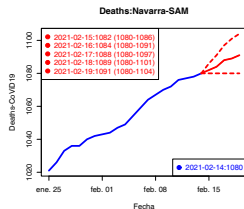
Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Fallecidos

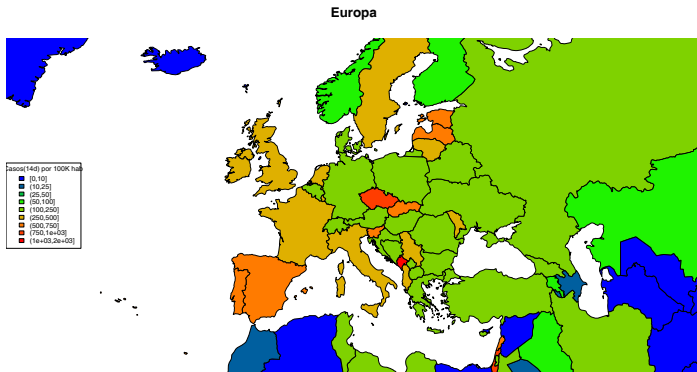


◀ Confirmados ▶ Fallecidos

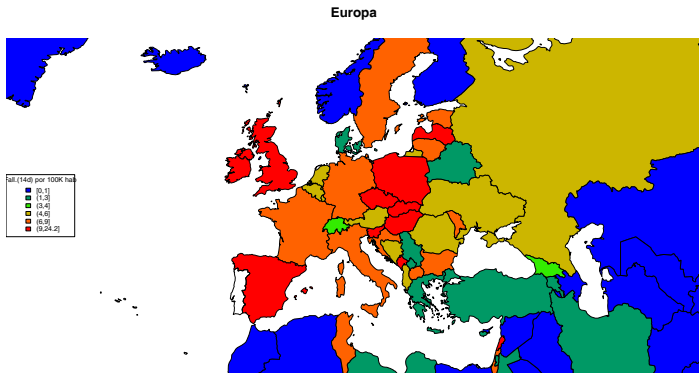
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Europa: Incidencia Acumulada (14d) por 100K hab.

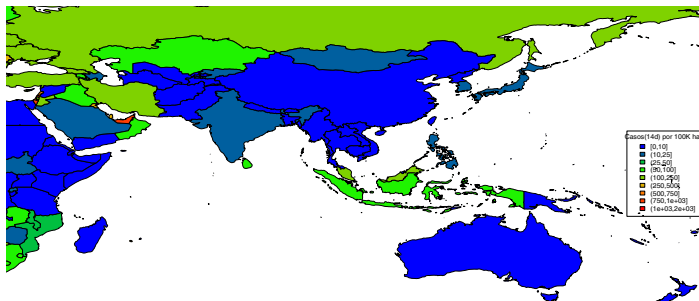


Europa: Fallecidos (14d) por 100K hab.



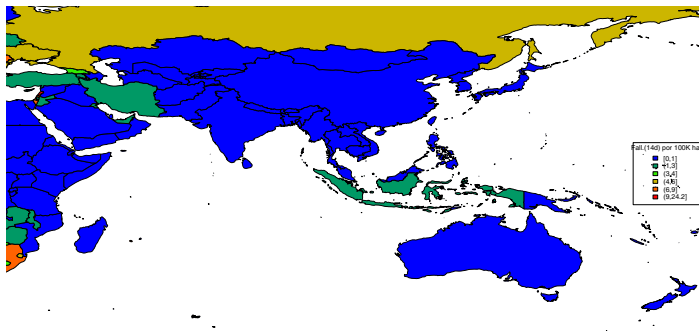
Asia y Oceanía: Incidencia acumulada (14d) por 100K hab.

Asia y Oceanía



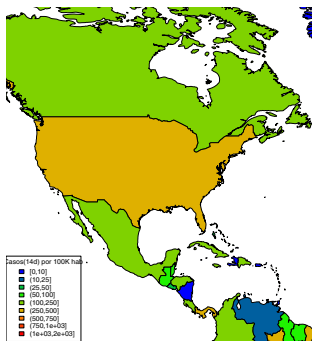
Asia y Oceanía: Fallecidos (14d) por 100K hab.

Asia y Oceanía

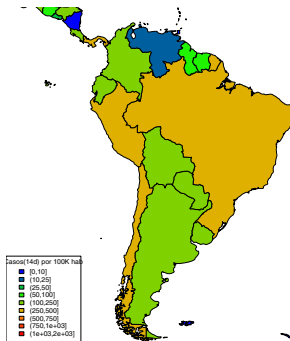


América: Incidencia acumulada (14d) por 100K hab.

América del Norte

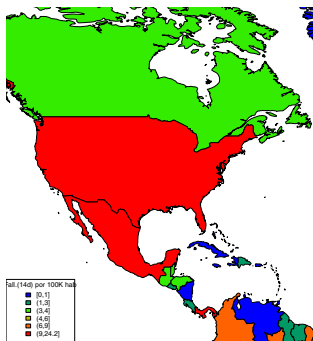


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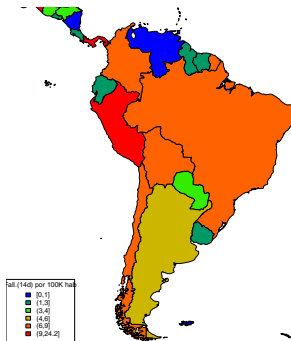


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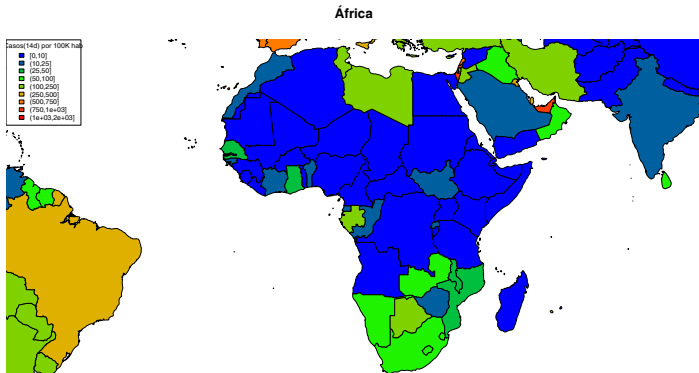
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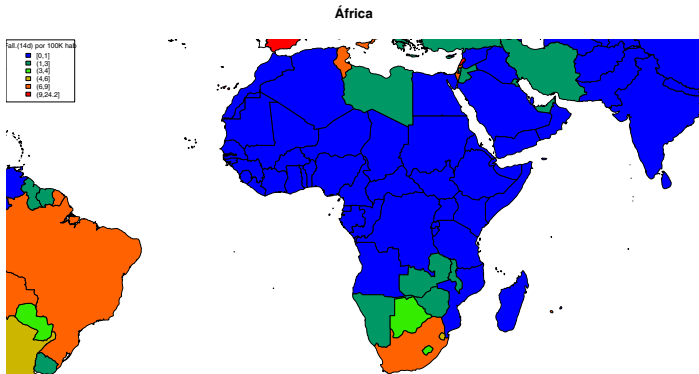
América del sur



África: Incidencia acumulada (14d) por 100K hab.



África: Fallecidos (14d) por 100K hab.



Breve descripción del Modelo de predicción

Objetivo: Predecir ratio de incremento de casos confirmados a 1–5 días: $r^{(k)}(t) = \frac{x_{t+k} - x_t}{x_t + 1}$

Información usada: Pasado de esta variable suavizada (retardo 1) durante los últimos 21 días: $R^{(1)} = \{r^{(1)}(-21), \dots, r^{(1)}(0)\}$.

Datos para alimentar el modelo: https://github.com/CSSEGISandData/COVID-19/tree/master/csse_covid_19_data/csse_covid_19_time_series/. Algunas series de tiempo (como el Diamond Princess) son filtrados por inconsistencia, presunta falta de veracidad o por valores anormalmente bajos. En la predicción final se reconstruye el número de casos esperado.

Se construyen tres modelos funcionales de la regresión general: $r^{(k)}(0) = f(R^{(1)}) + \epsilon$ donde la diferencia radica en la forma de la función f

- Lineal: $f(R^{(1)}) = \int_{-21}^0 R^{(1)}(t)\beta(t)dt$
- NP: f es una estimación no paramétrica tipo núcleo.
- SAM: f es una combinación aditiva de funciones suaves de las componentes principales funcionales.

Para el objetivo de predecir el ratio de incremento de fallecidos, se usa además del pasado de la propia variable, el ratio de incremento pasado de casos confirmados.