

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: 22/02/2021

Fuente: https://cnecovid.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	0.007	0.006	0.005	0.006	0.685	0.747	0.699
H2	0.033	0.019	0.031	0.018	0.015	0.019	0.688	0.826	0.707
H3	0.049	0.033	0.046	0.036	0.031	0	0.774	0.852	0.786
H4	0.07	0.052	0.066	0.06	0.051	0.058	0.812	0.865	0.822
H5	0.111	0.09	0.106	0.089	0.08	0.087	0.815	0.855	0.823

Último dato fichero: 22/02/2021.

Tabla Previsión Confirmados: Mod. Aditivo.

Last=22/02/2021

	Last	IA14	IA7	H1	H2	H3	H4	H5
España	3161467	183	61	3165874	3169879	3174263	3177159	3179455
Andalucía	473018	200	64	473840	474613	475542	476219	476570
Aragón	105862	213	75	106012	106148	106287	106388	106492
Asturias	42719	176	55	42815	42888	42984	43054	43090
Canarias	39808	88	36	39926	40028	40134	40229	40326
Cantabria	24419	128	41	24466	24505	24546	24576	24601
Castilla.y.León	204685	199	65	204879	205046	205279	205441	205565
Castilla.La.Mancha	167259	120	32	167355	167479	167574	167596	167608
Cataluña	568613	195	73	569533	570278	571165	571791	572354
Ceuta	4522	267	88	4533	4540	4551	4560	4567
Comunidad.Valenciana	376022	148	39	376325	376733	377038	377165	377170
Extremadura	68825	81	22	68860	68899	68936	68951	68977
Galicia	110587	144	45	110790	110969	111178	111329	111423
Islas.Baleares	55803	85	23	55868	55941	55985	55997	56010
La.Rioja	27376	93	23	27391	27416	27425	27421	27421
Madrid	578726	277	95	579772	580738	581651	582268	582840
Melilla	6843	325	124	6857	6866	6880	6892	6904
Murcia	105851	112	38	105935	106025	106105	106146	106199
Navarra	51041	123	51	51080	51114	51162	51199	51244
País.Vasco	149488	232	86	149772	149994	150279	150503	150704

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

Tabla Ratio Incr. Confirmados: Mod. Lineal.

Last=22/02/2021

	Last	H1	H2	H3	H4	H5
España	0.0016	0.0018	0.0034	0.0047	0.0058	0.0066
Andalucía	0.0020	0.0021	0.0040	0.0054	0.0066	0.0073
Aragón	0.0016	0.0018	0.0035	0.0048	0.0062	0.0072
Asturias	0.0024	0.0021	0.0040	0.0056	0.0070	0.0076
Canarias	0.0031	0.0030	0.0059	0.0086	0.0115	0.0139
Cantabria	0.0018	0.0018	0.0037	0.0051	0.0066	0.0075
Castilla.y.León	0.0013	0.0016	0.0029	0.0039	0.0050	0.0056
Castilla.La.Mancha	0.0008	0.0012	0.0023	0.0028	0.0033	0.0034
Cataluña	0.0016	0.0018	0.0036	0.0050	0.0063	0.0072
Ceuta	0.0028	0.0022	0.0040	0.0059	0.0078	0.0091
Comunidad.Valenciana	0.0010	0.0014	0.0026	0.0032	0.0037	0.0038
Extremadura	0.0007	0.0012	0.0021	0.0028	0.0035	0.0039
Galicia	0.0020	0.0021	0.0039	0.0054	0.0067	0.0075
Islas.Baleares	0.0009	0.0014	0.0028	0.0036	0.0042	0.0044
La.Rioja	0.0006	0.0012	0.0023	0.0027	0.0030	0.0031
Madrid	0.0019	0.0021	0.0039	0.0054	0.0067	0.0078
Melilla	0.0025	0.0022	0.0040	0.0060	0.0080	0.0096
Murcia	0.0009	0.0014	0.0026	0.0035	0.0043	0.0048
Navarra	0.0010	0.0015	0.0027	0.0038	0.0050	0.0059
País.Vasco	0.0021	0.0022	0.0041	0.0059	0.0076	0.0089

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

Tabla Ratio Incr. Confirmados: Mod. No Paramétrico.

Last=22/02/2021

	Last	H1	H2	H3	H4	H5
España	0.0016	0.0030	0.0061	0.0090	0.0120	0.0149
Andalucía	0.0020	0.0037	0.0074	0.0110	0.0145	0.0180
Aragón	0.0016	0.0028	0.0057	0.0085	0.0112	0.0140
Asturias	0.0024	0.0041	0.0081	0.0120	0.0159	0.0197
Canarias	0.0031	0.0041	0.0081	0.0120	0.0159	0.0199
Cantabria	0.0018	0.0029	0.0059	0.0089	0.0117	0.0147
Castilla y León	0.0013	0.0028	0.0057	0.0084	0.0112	0.0140
Castilla-La Mancha	0.0008	0.0022	0.0046	0.0068	0.0091	0.0114
Cataluña	0.0016	0.0027	0.0055	0.0082	0.0109	0.0137
Ceuta	0.0028	0.0044	0.0086	0.0127	0.0169	0.0210
Comunidad Valenciana	0.0010	0.0027	0.0056	0.0083	0.0109	0.0136
Extremadura	0.0007	0.0020	0.0040	0.0060	0.0080	0.0101
Galicia	0.0020	0.0037	0.0072	0.0108	0.0143	0.0178
Islas Baleares	0.0009	0.0023	0.0047	0.0069	0.0092	0.0115
La Rioja	0.0006	0.0020	0.0041	0.0060	0.0080	0.0101
Madrid	0.0019	0.0033	0.0065	0.0097	0.0129	0.0161
Melilla	0.0025	0.0038	0.0076	0.0113	0.0150	0.0187
Murcia	0.0009	0.0021	0.0044	0.0065	0.0087	0.0110
Navarra	0.0010	0.0021	0.0043	0.0063	0.0084	0.0106
País Vasco	0.0021	0.0033	0.0067	0.0100	0.0132	0.0165

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

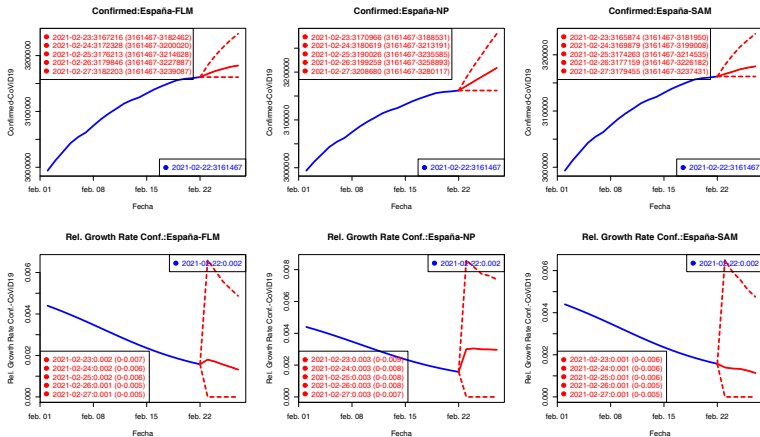
Tabla Ratio Incr. Confirmados: Mod. Aditivo.

Last=22/02/2021

	Last	H1	H2	H3	H4	H5
España	0.0016	0.0014	0.0027	0.0040	0.0050	0.0057
Andalucía	0.0020	0.0017	0.0034	0.0053	0.0068	0.0075
Aragón	0.0016	0.0014	0.0027	0.0040	0.0050	0.0060
Asturias	0.0024	0.0022	0.0039	0.0062	0.0078	0.0087
Canarias	0.0031	0.0030	0.0055	0.0082	0.0106	0.0130
Cantabria	0.0018	0.0019	0.0035	0.0052	0.0064	0.0075
Castilla.y.León	0.0013	0.0009	0.0018	0.0029	0.0037	0.0043
Castilla.La.Mancha	0.0008	0.0006	0.0013	0.0019	0.0020	0.0021
Cataluña	0.0016	0.0016	0.0029	0.0045	0.0056	0.0066
Ceuta	0.0028	0.0024	0.0040	0.0064	0.0084	0.0099
Comunidad.Valenciana	0.0010	0.0008	0.0019	0.0027	0.0030	0.0031
Extremadura	0.0007	0.0005	0.0011	0.0016	0.0018	0.0022
Galicia	0.0020	0.0018	0.0035	0.0053	0.0067	0.0076
Islas.Baleares	0.0009	0.0012	0.0025	0.0033	0.0035	0.0037
La.Rioja	0.0006	0.0005	0.0015	0.0018	0.0017	0.0016
Madrid	0.0019	0.0018	0.0035	0.0051	0.0061	0.0071
Melilla	0.0025	0.0020	0.0033	0.0054	0.0072	0.0089
Murcia	0.0009	0.0008	0.0016	0.0024	0.0028	0.0033
Navarra	0.0010	0.0008	0.0014	0.0024	0.0031	0.0040
País.Vasco	0.0021	0.0019	0.0034	0.0053	0.0068	0.0081

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

Confirmados: España

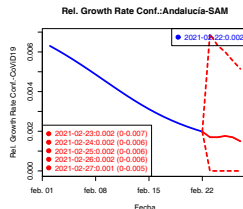
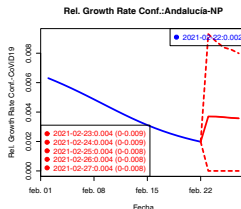
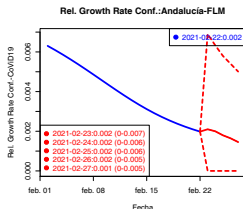
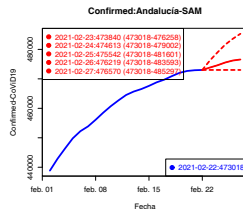
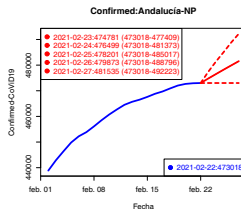
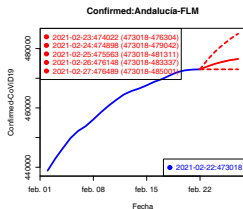


Los valores del Ratio de incremento de H2—H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Andalucía

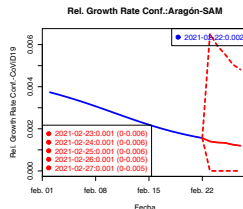
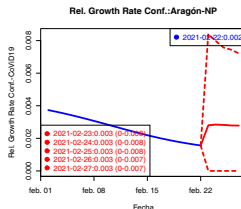
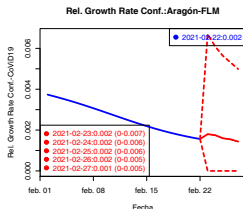
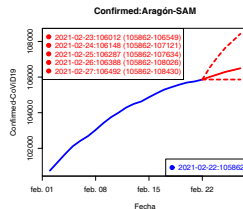
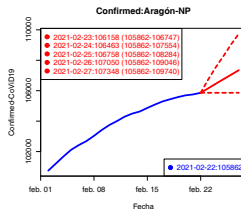
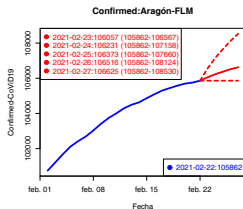


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Aragón



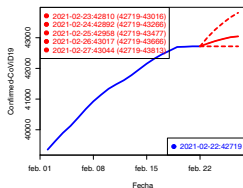
Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

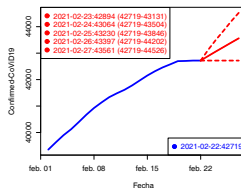
◀ Fallecidos

Confirmados: Asturias

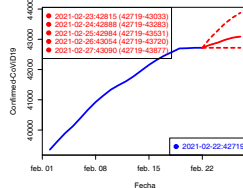
Confirmed: Asturias-FLM



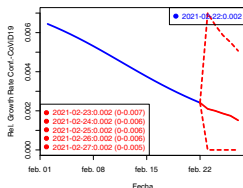
Confirmed: Asturias-NP



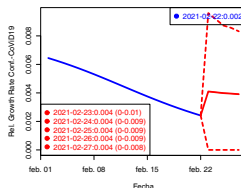
Confirmed: Asturias-SAM



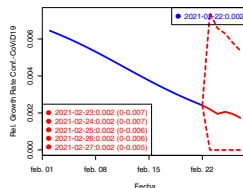
Rel. Growth Rate Conf.: Asturias-FLM



Rel. Growth Rate Conf.: Asturias-NP



Rel. Growth Rate Conf.: Asturias-SAM

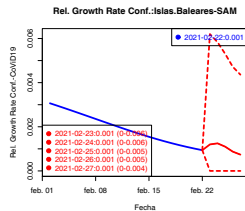
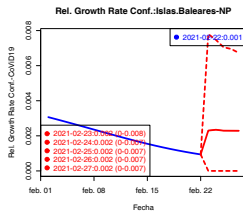
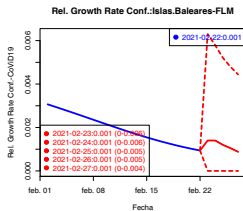
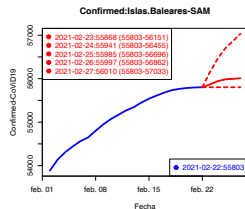
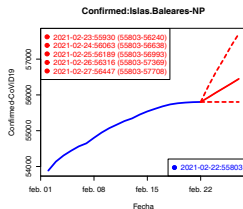
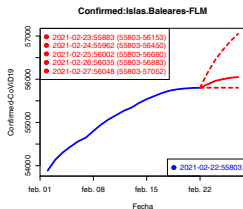


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Islas Baleares

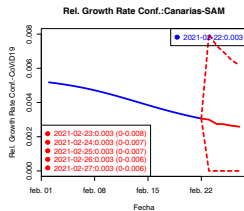
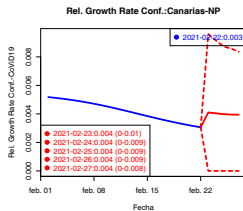
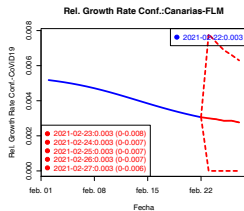
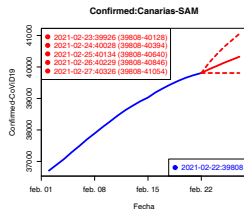
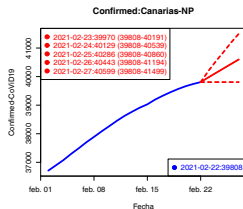
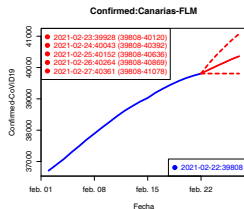


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Canarias

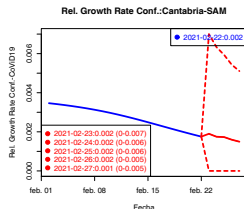
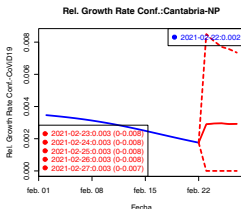
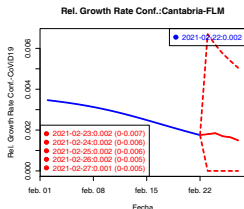
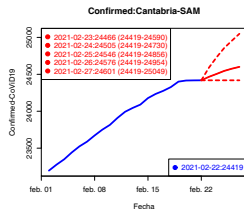
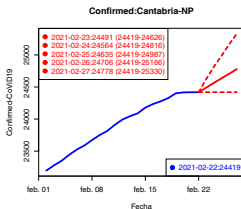
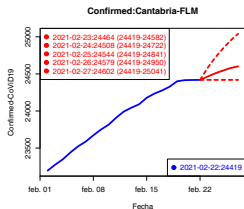


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Cantabria



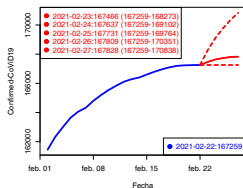
Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

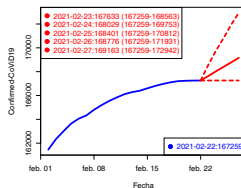
◀ Fallecidos

Confirmados: Castilla-La Mancha

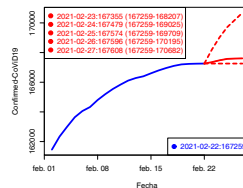
Confirmed:Castilla.La.Mancha-FLM



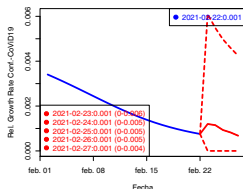
Confirmed:Castilla.La.Mancha-NP



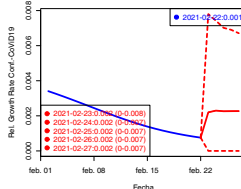
Confirmed:Castilla.La.Mancha-SAM



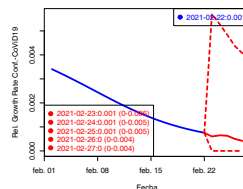
Rel. Growth Rate Conf.:Castilla.La.Mancha-FLM



Rel. Growth Rate Conf.:Castilla.La.Mancha-NP



Rel. Growth Rate Conf.:Castilla.La.Mancha-SAM

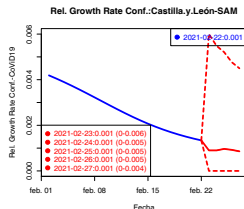
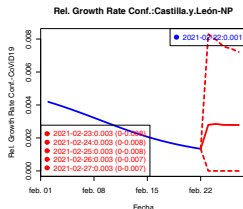
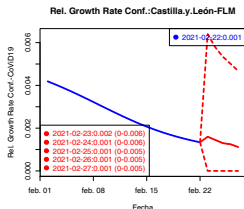
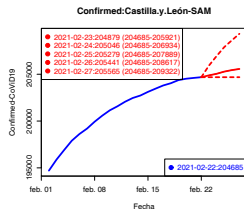
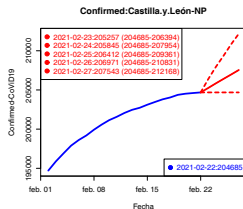
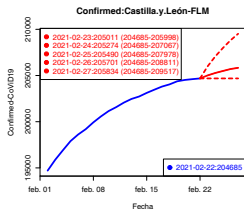


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Castilla y León

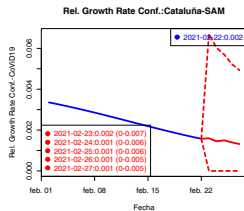
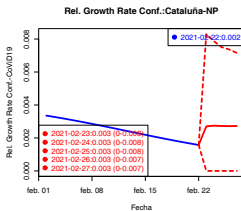
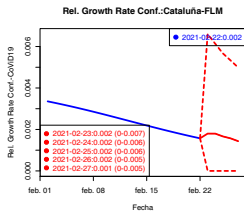
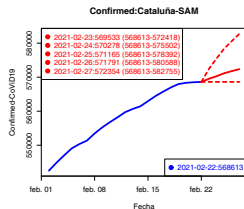
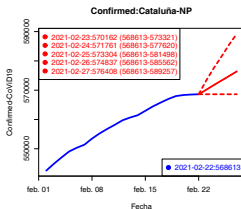
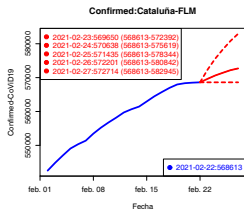


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Cataluña

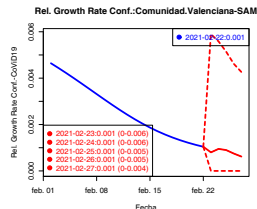
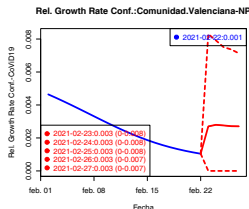
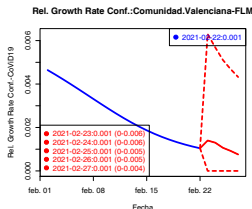
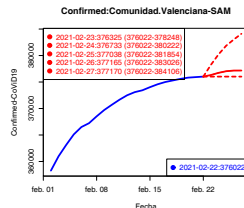
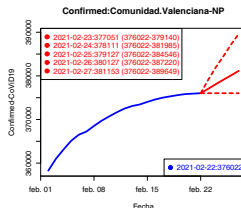
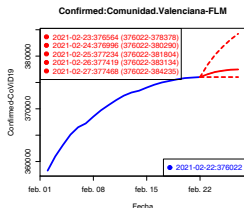


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: C. Valenciana

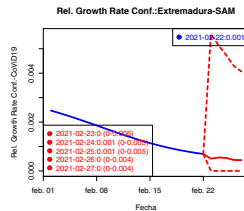
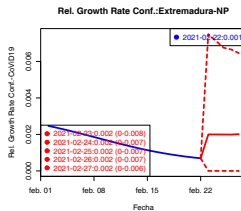
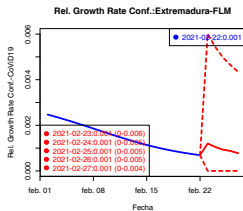
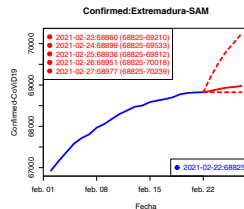
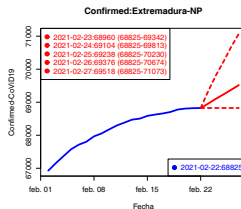
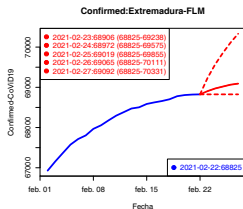


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Extremadura



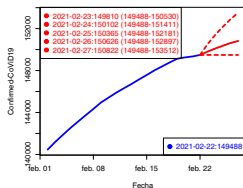
Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

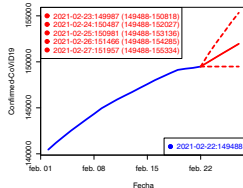
◀ Fallecidos

Confirmados: País Vasco

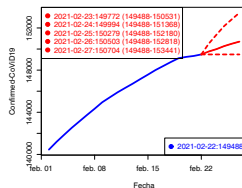
Confirmed:País.Vasco-FLM



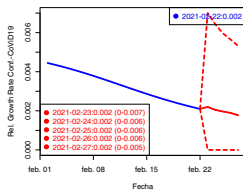
Confirmed:País.Vasco-NP



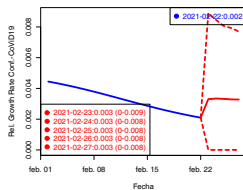
Confirmed:País.Vasco-SAM



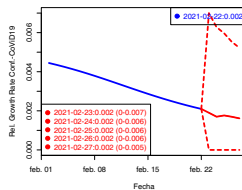
Rel. Growth Rate Conf.:País.Vasco-FLM



Rel. Growth Rate Conf.:País.Vasco-NP



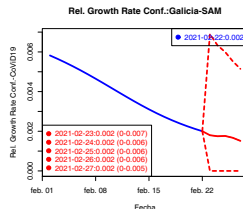
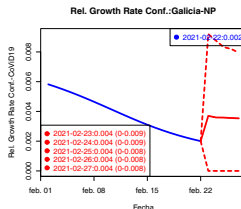
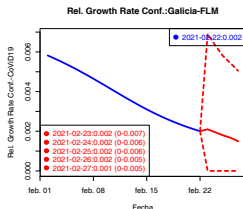
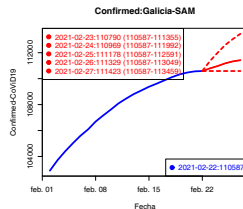
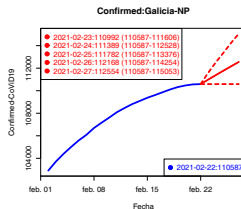
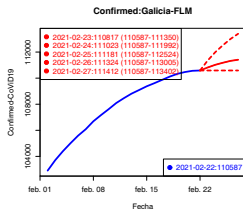
Rel. Growth Rate Conf.:País.Vasco-SAM



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

[← Confirmados](#)
[← Fallecidos](#)

Confirmados: Galicia

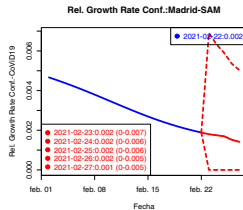
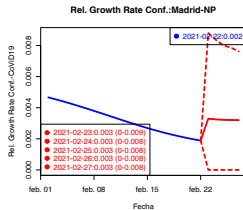
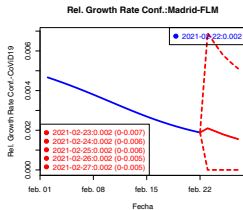
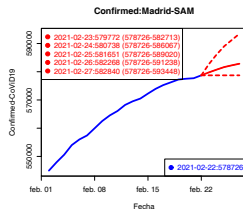
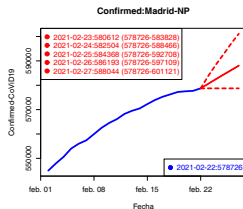
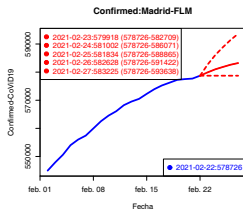


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Madrid

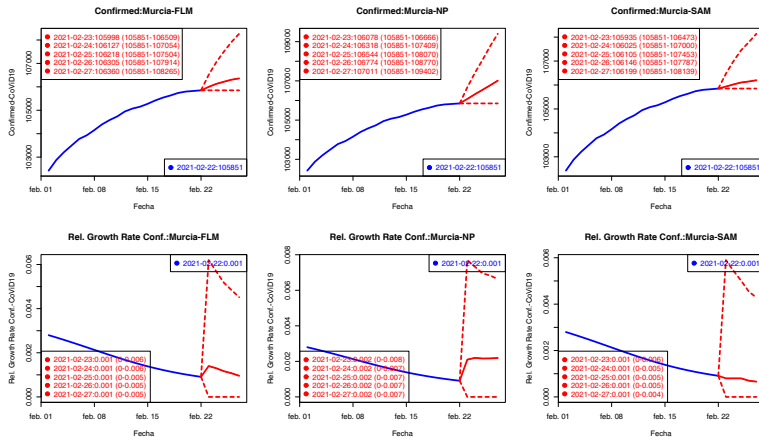


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Murcia

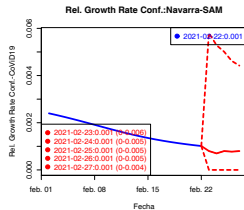
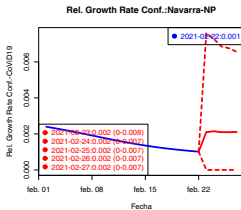
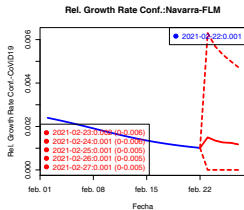
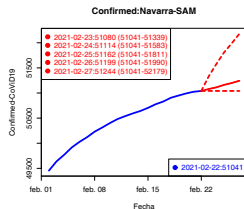
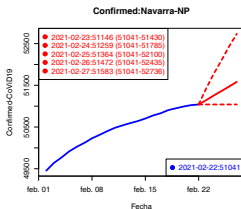
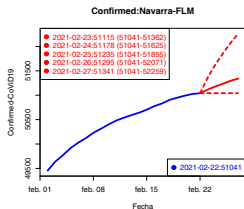


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Navarra

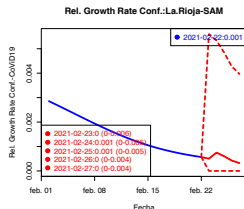
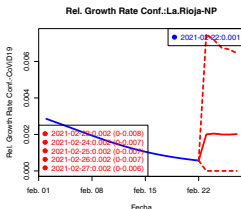
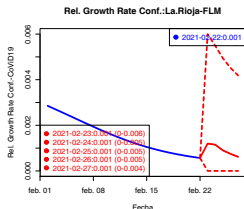
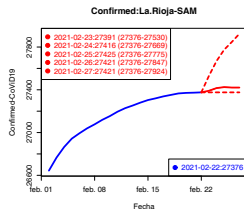
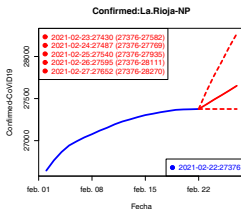
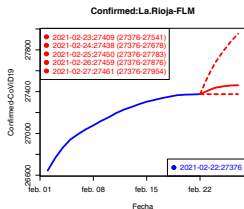


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ 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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 - Predicciones
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Modelos para fallecidos por CoViD-19

Último dato: 22/02/2021 Fuente: https://cneccovid.isciii.es/covid19/resources/casos_hosp_uci_def_sexo_edad_provres.csv

Predicciones:

▶ España

► Andalucía

► Aragón

► Asturias

▶ I. Balears

► **Canarias**

► **Cantabria**

► **Castilla-La Mancha**

► **Castilla y León**

▶ Cataluña

► C. Valenciana

▶ Extremadura

▶ País Vasco

▶ Galicia

► Madrid

► Murcia

▶ Navarra

► **La Rioja**

▶ Mod Lineal

▶ Mod NF

▶ 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	0.003	0.003	0.002	0.002	0.002	0.661	0.634	0.678
H2	0.01	0.012	0.01	0.006	0.006	0.005	0.712	0.677	0.726
H3	0.029	0.032	0.028	0.009	0.013	0.009	0.673	0.641	0.681
H4	0.032	0.038	0.031	0.014	0.02	0.012	0.766	0.727	0.773
H5	0.042	0.052	0.041	0.02	0.031	0.016	0.8	0.758	0.807

Tabla Previsión Fallecidos: Mod. Lineal.

Last=22/02/2021

	Last	H1	H2	H3	H4	H5
España	67689	67818	67923	68029	68090	68117
Andalucía	8058	8081	8098	8112	8123	8129
Aragón	3207	3214	3221	3228	3233	3237
Asturias	1731	1737	1743	1750	1755	1759
Canarias	572	574	576	578	580	582
Cantabria	502	503	503	504	504	504
Castilla y León	6228	6238	6246	6255	6260	6263
Castilla-La Mancha	5516	5523	5528	5533	5534	5531
Cataluña	10145	10155	10163	10172	10174	10173
Ceuta	79	79	80	80	80	81
Comunidad Valenciana	6413	6434	6452	6466	6476	6481
Extremadura	1673	1676	1678	1679	1679	1679
Galicia	2164	2172	2180	2185	2190	2193
Islas Baleares	684	685	687	688	689	689
La Rioja	721	723	724	725	726	727
Madrid	13696	13710	13719	13734	13737	13734
Melilla	66	66	67	67	67	68
Murcia	1432	1438	1443	1447	1451	1453
Navarra	1090	1091	1091	1093	1093	1094
País Vasco	3712	3719	3725	3732	3736	3738

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

Tabla Previsión Fallecidos: Mod. No Paramétrico.

Last=22/02/2021

	Last	H1	H2	H3	H4	H5
España	67689	67950	68204	68490	68745	69006
Andalucía	8058	8106	8153	8201	8246	8291
Aragón	3207	3219	3230	3243	3254	3266
Asturias	1731	1738	1746	1754	1761	1768
Canarias	572	574	576	579	581	583
Cantabria	502	503	505	506	508	510
Castilla y León	6228	6250	6271	6296	6317	6340
Castilla-La Mancha	5516	5536	5555	5577	5596	5616
Cataluña	10145	10169	10192	10218	10242	10270
Ceuta	79	79	80	80	80	80
Comunidad Valenciana	6413	6452	6491	6531	6567	6605
Extremadura	1673	1680	1688	1696	1703	1710
Galicia	2164	2178	2192	2206	2219	2232
Islas Baleares	684	686	689	692	694	697
La Rioja	721	724	727	730	733	736
Madrid	13696	13734	13769	13810	13847	13889
Melilla	66	67	67	68	68	69
Murcia	1432	1441	1451	1460	1469	1478
Navarra	1090	1093	1096	1099	1102	1106
País Vasco	3712	3725	3737	3752	3764	3778

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

Tabla Previsión Fallecidos: Mod. Aditivo.

Last=22/02/2021

	Last	H1	H2	H3	H4	H5
España	67689	67815	67849	68072	68182	68158
Andalucía	8058	8087	8097	8123	8143	8155
Aragón	3207	3214	3218	3230	3235	3238
Asturias	1731	1737	1741	1752	1757	1759
Canarias	572	574	575	578	580	582
Cantabria	502	502	503	504	504	504
Castilla y León	6228	6237	6239	6258	6267	6265
Castilla-La Mancha	5516	5524	5524	5535	5542	5537
Cataluña	10145	10153	10154	10170	10170	10170
Ceuta	79	79	80	80	80	80
Comunidad Valenciana	6413	6441	6455	6473	6491	6506
Extremadura	1673	1677	1678	1680	1683	1684
Galicia	2164	2173	2179	2187	2193	2200
Islas Baleares	684	685	686	688	689	690
La Rioja	721	723	724	726	727	728
Madrid	13696	13703	13700	13742	13749	13734
Melilla	66	66	67	67	67	68
Murcia	1432	1439	1444	1449	1454	1460
Navarra	1090	1091	1091	1093	1094	1095
País Vasco	3712	3718	3721	3736	3742	3741

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

Tabla Ratio Incr. Fallecidos: Mod. Lineal.

Last=22/02/2021

	Last	H1	H2	H3	H4	H5
España	0.0022	0.0019	0.0035	0.0050	0.0059	0.0063
Andalucía	0.0038	0.0028	0.0050	0.0067	0.0081	0.0088
Aragón	0.0025	0.0023	0.0044	0.0066	0.0081	0.0093
Asturias	0.0039	0.0037	0.0072	0.0109	0.0136	0.0162
Canarias	0.0038	0.0032	0.0063	0.0102	0.0134	0.0171
Cantabria	0.0013	0.0013	0.0023	0.0035	0.0039	0.0038
Castilla.y.León	0.0020	0.0016	0.0029	0.0044	0.0052	0.0056
Castilla.La.Mancha	0.0016	0.0013	0.0022	0.0030	0.0032	0.0028
Cataluña	0.0008	0.0010	0.0018	0.0026	0.0029	0.0028
Ceuta	0.0047	0.0052	0.0104	0.0143	0.0184	0.0230
Comunidad.Valenciana	0.0042	0.0032	0.0061	0.0082	0.0099	0.0107
Extremadura	0.0022	0.0017	0.0029	0.0035	0.0039	0.0035
Galicia	0.0047	0.0038	0.0073	0.0099	0.0121	0.0133
Islas.Baleares	0.0022	0.0020	0.0039	0.0057	0.0066	0.0071
La.Rioja	0.0026	0.0021	0.0039	0.0058	0.0070	0.0077
Madrid	0.0010	0.0010	0.0017	0.0028	0.0030	0.0028
Melilla	0.0079	0.0044	0.0075	0.0131	0.0190	0.0262
Murcia	0.0050	0.0038	0.0075	0.0107	0.0132	0.0150
Navarra	0.0013	0.0009	0.0014	0.0024	0.0029	0.0034
País.Vasco	0.0020	0.0019	0.0035	0.0054	0.0065	0.0070

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

Tabla Ratio Incr. Fallecidos: Mod. No Paramétrico.

Last=22/02/2021

	Last	H1	H2	H3	H4	H5
España	0.0022	0.0039	0.0076	0.0118	0.0156	0.0195
Andalucía	0.0038	0.0059	0.0118	0.0178	0.0233	0.0289
Aragón	0.0025	0.0036	0.0072	0.0111	0.0147	0.0184
Asturias	0.0039	0.0043	0.0084	0.0131	0.0172	0.0214
Canarias	0.0038	0.0038	0.0075	0.0117	0.0155	0.0193
Cantabria	0.0013	0.0029	0.0057	0.0089	0.0118	0.0150
Castilla y León	0.0020	0.0035	0.0070	0.0108	0.0143	0.0179
Castilla-La Mancha	0.0016	0.0036	0.0071	0.0110	0.0145	0.0182
Cataluña	0.0008	0.0024	0.0046	0.0072	0.0095	0.0123
Ceuta	0.0047	0.0036	0.0072	0.0112	0.0148	0.0185
Comunidad Valenciana	0.0042	0.0061	0.0122	0.0183	0.0240	0.0299
Extremadura	0.0022	0.0045	0.0088	0.0136	0.0179	0.0222
Galicia	0.0047	0.0065	0.0128	0.0192	0.0252	0.0313
Islas Baleares	0.0022	0.0036	0.0071	0.0111	0.0146	0.0183
La Rioja	0.0026	0.0040	0.0080	0.0124	0.0163	0.0203
Madrid	0.0010	0.0027	0.0054	0.0083	0.0110	0.0141
Melilla	0.0079	0.0083	0.0166	0.0248	0.0328	0.0409
Murcia	0.0050	0.0065	0.0130	0.0195	0.0256	0.0318
Navarra	0.0013	0.0028	0.0055	0.0085	0.0113	0.0144
País Vasco	0.0020	0.0035	0.0069	0.0107	0.0141	0.0177

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

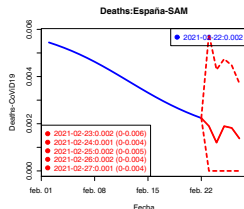
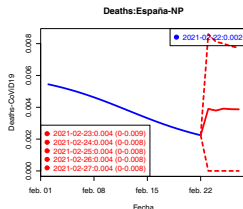
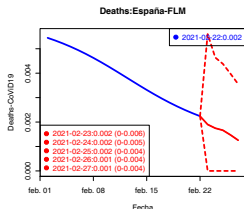
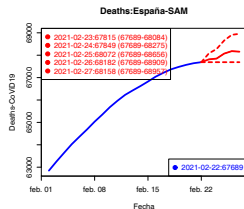
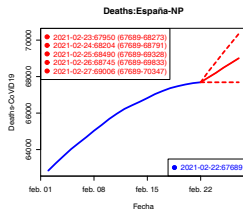
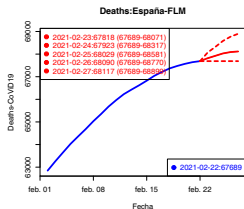
Tabla Ratio Incr. Fallecidos: Mod. Aditivo.

Last=22/02/2021

	Last	H1	H2	H3	H4	H5
España	0.0022	0.0019	0.0024	0.0057	0.0073	0.0069
Andalucía	0.0038	0.0035	0.0049	0.0080	0.0105	0.0121
Aragón	0.0025	0.0020	0.0035	0.0071	0.0088	0.0097
Asturias	0.0039	0.0033	0.0059	0.0124	0.0148	0.0163
Canarias	0.0038	0.0027	0.0053	0.0110	0.0144	0.0170
Cantabria	0.0013	0.0007	0.0012	0.0039	0.0047	0.0042
Castilla.y.León	0.0020	0.0015	0.0018	0.0049	0.0062	0.0059
Castilla.La.Mancha	0.0016	0.0015	0.0015	0.0035	0.0047	0.0039
Cataluña	0.0008	0.0008	0.0009	0.0024	0.0024	0.0025
Ceuta	0.0047	0.0038	0.0065	0.0093	0.0101	0.0162
Comunidad.Valenciana	0.0042	0.0043	0.0065	0.0094	0.0122	0.0145
Extremadura	0.0022	0.0025	0.0032	0.0043	0.0062	0.0065
Galicia	0.0047	0.0042	0.0069	0.0105	0.0136	0.0164
Islas.Baleares	0.0022	0.0021	0.0034	0.0064	0.0079	0.0081
La.Rioja	0.0026	0.0029	0.0040	0.0069	0.0089	0.0093
Madrid	0.0010	0.0005	0.0003	0.0033	0.0039	0.0028
Melilla	0.0079	0.0042	0.0081	0.0131	0.0174	0.0286
Murcia	0.0050	0.0049	0.0086	0.0115	0.0152	0.0192
Navarra	0.0013	0.0010	0.0011	0.0027	0.0037	0.0041
País.Vasco	0.0020	0.0015	0.0025	0.0065	0.0080	0.0077

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

Fallecidos: España

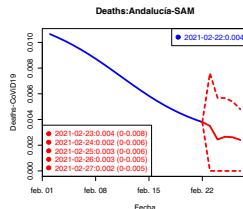
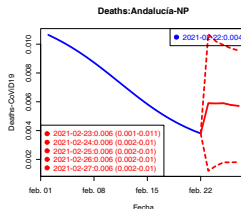
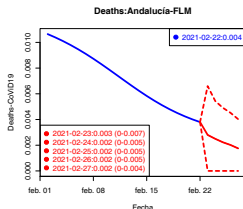
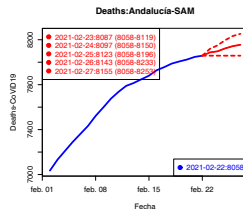
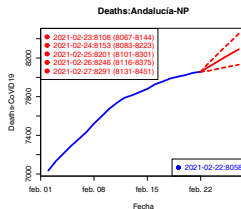
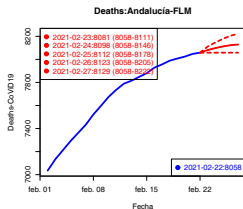


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

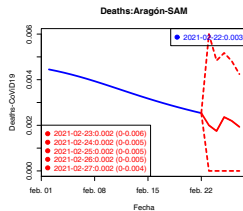
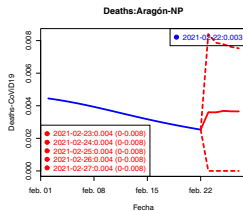
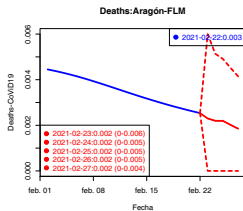
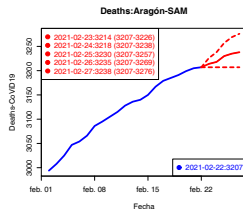
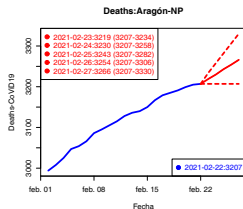
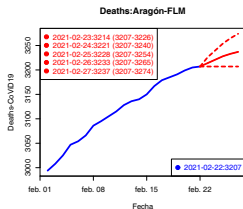
◀ Fallecidos

Fallecidos: Andalucía



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

Fallecidos: Aragón

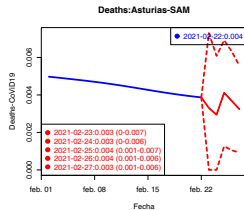
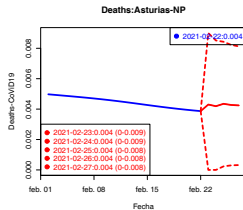
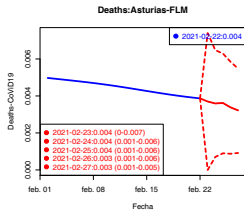
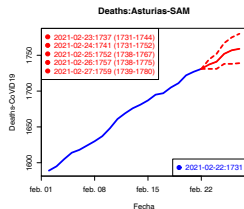
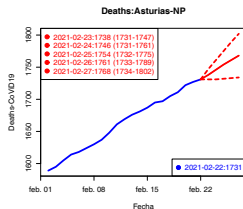
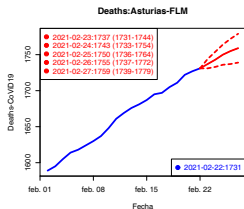


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Asturias

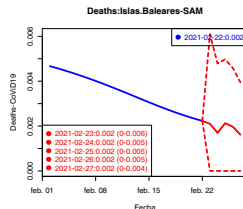
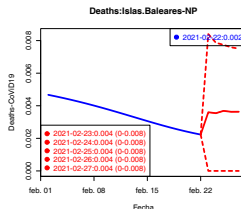
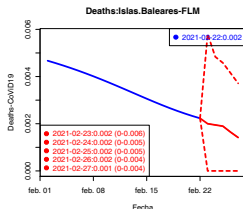
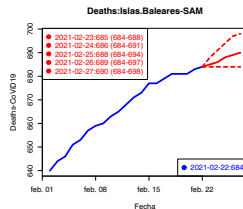
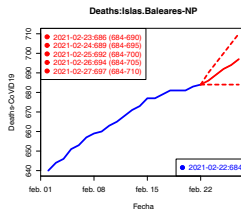
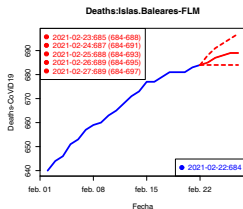


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Islas Baleares

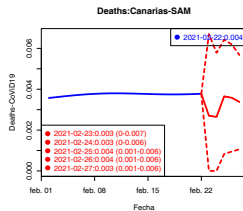
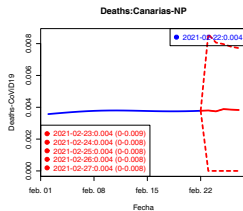
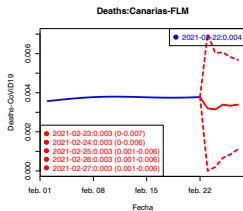
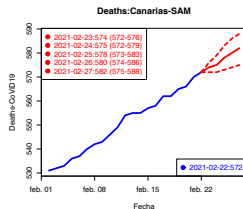
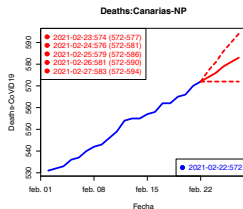
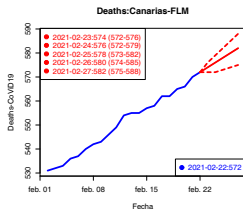


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Canarias

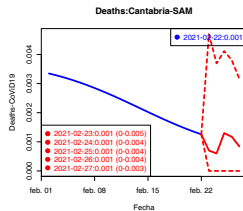
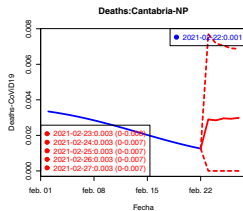
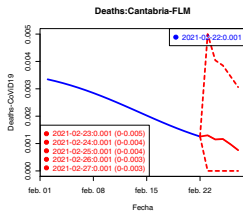
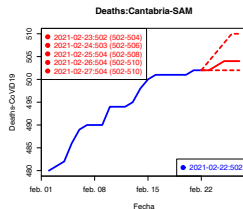
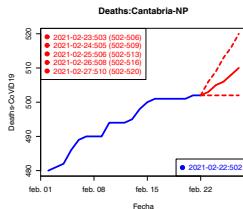
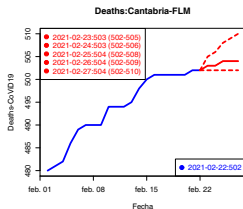


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Cantabria

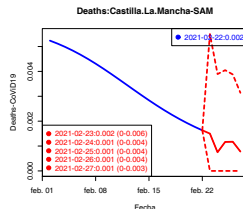
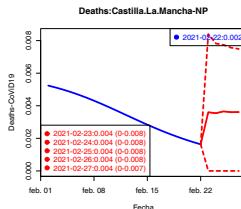
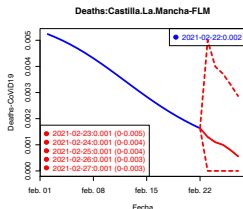
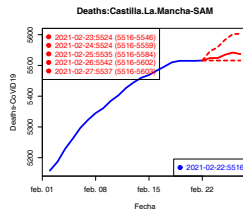
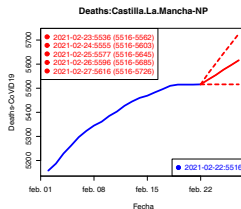
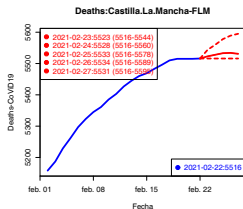


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Castilla-La Mancha

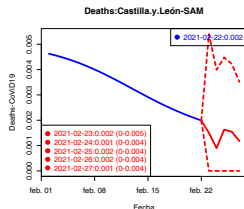
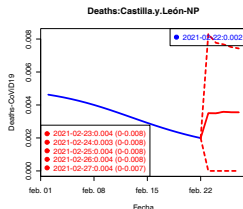
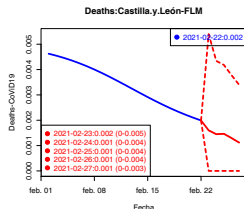
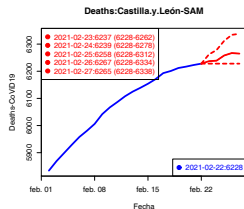
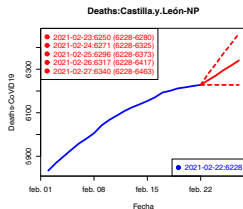
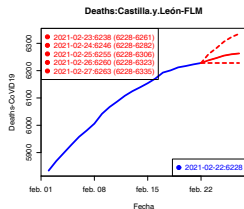


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Castilla y León

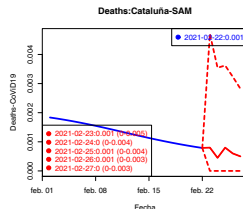
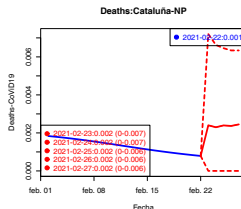
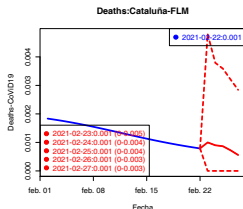
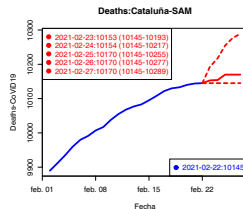
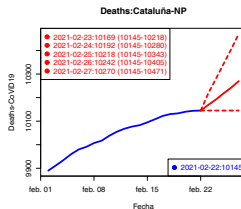
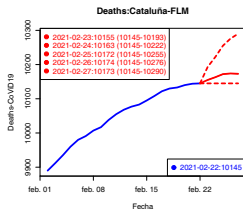


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

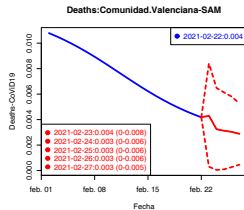
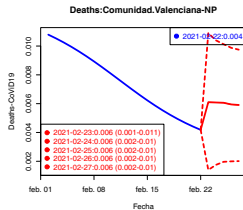
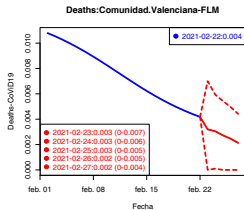
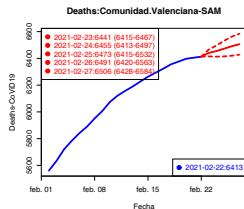
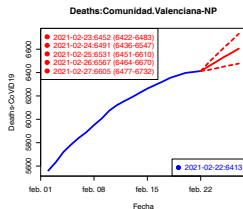
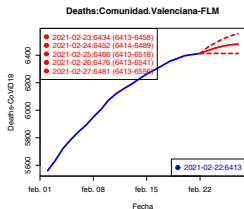
◀ Fallecidos

Fallecidos: Cataluña



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

Fallecidos: C. Valenciana

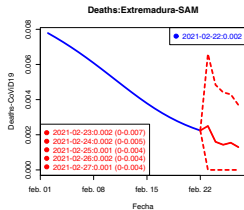
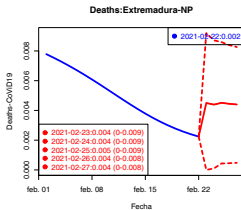
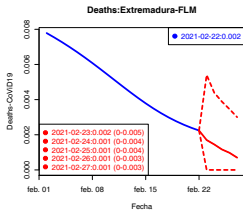
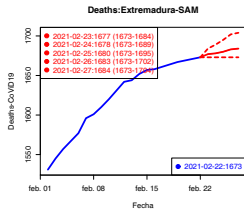
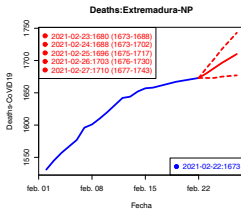
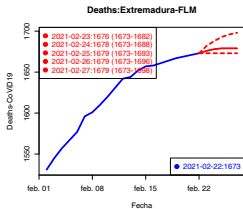


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

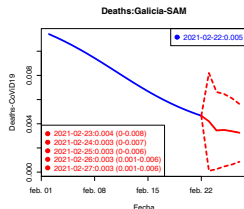
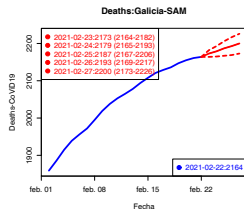
Fallecidos: Extremadura



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

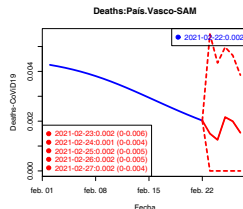
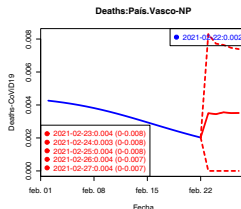
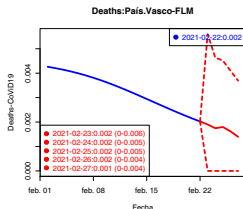
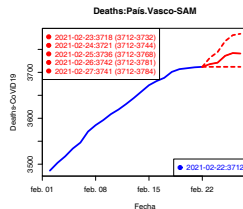
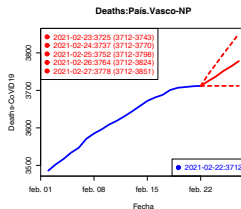
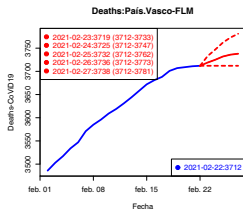
◀ Confirmados

◀ Fallecidos



◀ Confirmados ▶ Fallecidos

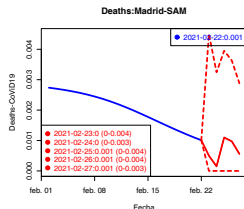
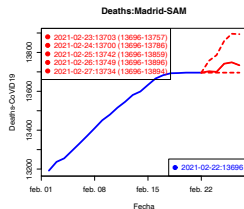
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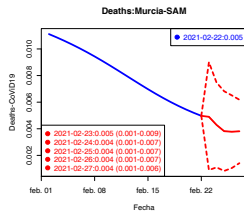
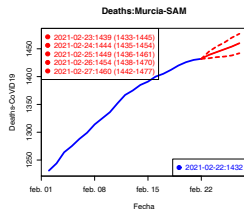
Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

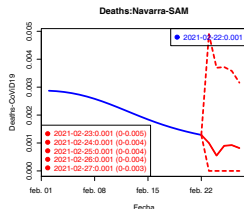
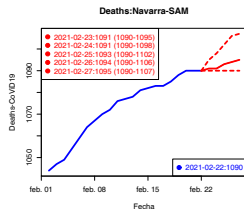
◀ Fallecidos



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

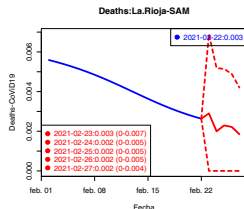
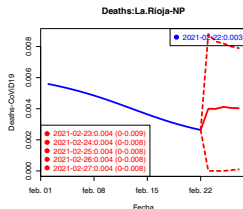
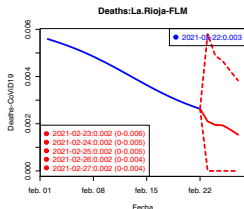
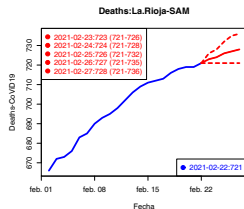
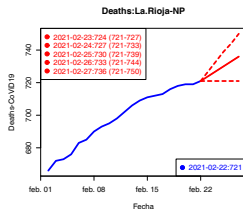
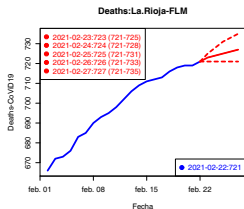


◀ Confirmados ▶ Fallecidos



◀ Confirmados ▶ Fallecidos

Fallecidos: La Rioja



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

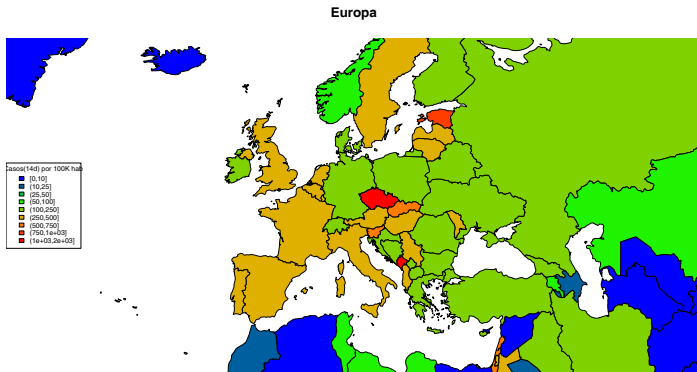
◀ Confirmados

◀ Fallecidos

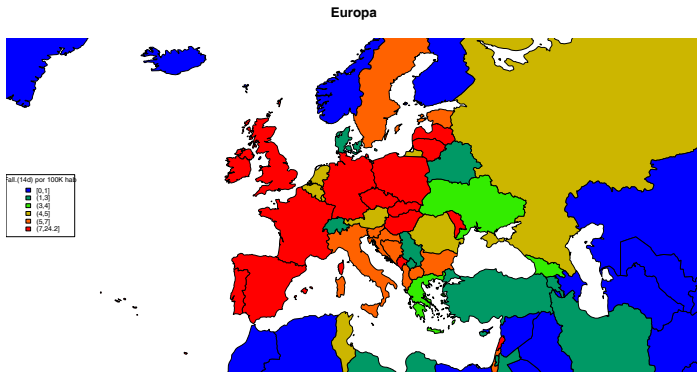
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Europa: Incidencia Acumulada (14d) por 100K hab.

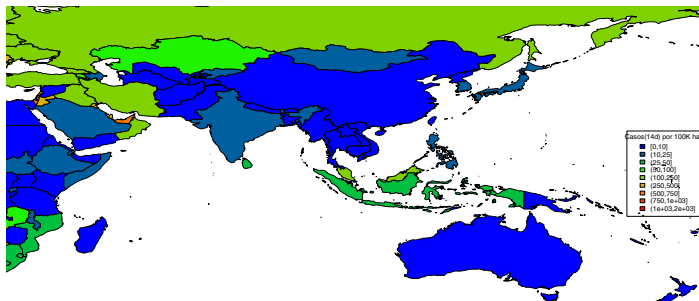


Europa: Fallecidos (14d) por 100K hab.



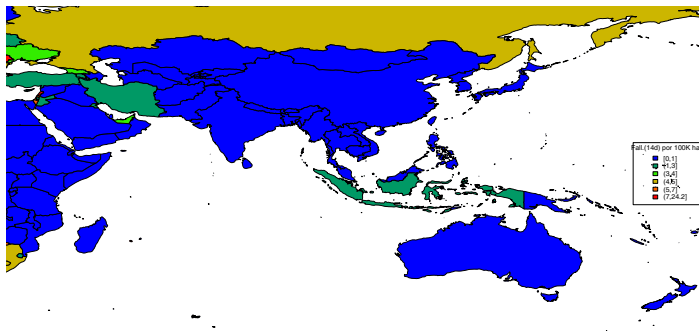
Asia y Oceanía: Incidencia acumulada (14d) por 100K hab.

Asia y Oceanía



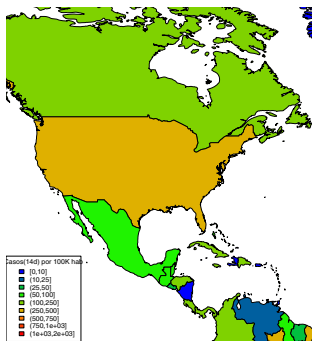
Asia y Oceanía: Fallecidos (14d) por 100K hab.

Asia y Oceanía

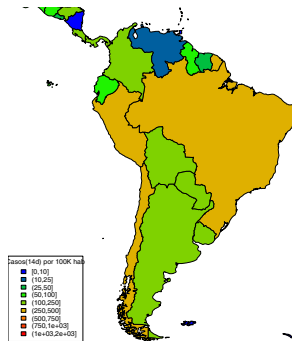


América: Incidencia acumulada (14d) por 100K hab.

América del Norte

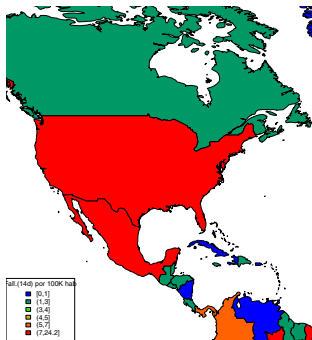


América del sur

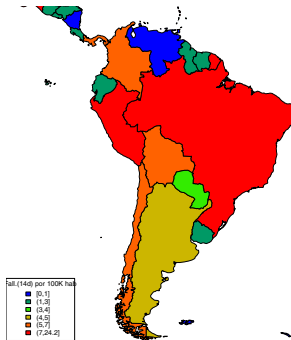


América: Fallecidos (14d) por 100K hab.

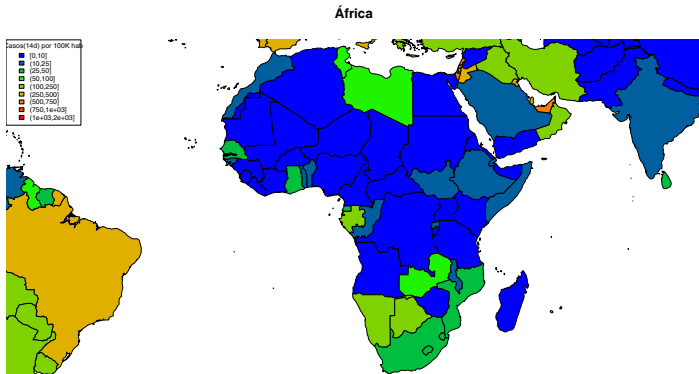
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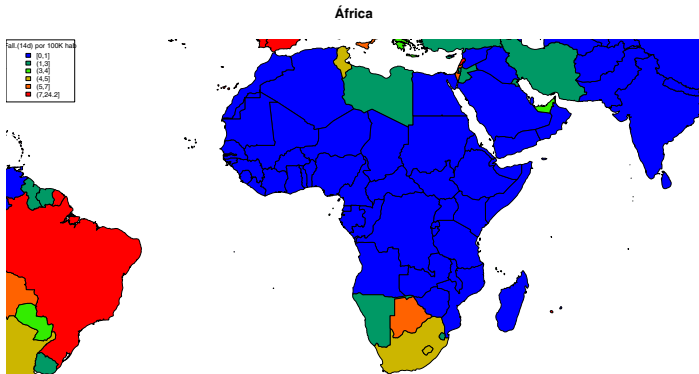
América del sur



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.