

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: 17/02/2021

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	0.008	0.006	0.005	0.006	0.683	0.745	0.698
H2	0.033	0.019	0.031	0.018	0.015	0.019	0.686	0.826	0.705
H3	0.049	0.034	0.047	0.038	0.031	0	0.773	0.851	0.784
H4	0.071	0.053	0.067	0.063	0.052	0.06	0.811	0.864	0.82
H5	0.113	0.091	0.108	0.092	0.082	0.089	0.814	0.854	0.822

Último dato fichero: 17/02/2021.

Tabla Previsión Confirmados: Mod. Aditivo.

Last=17/02/2021

	Last	IA14	IA7	H1	H2	H3	H4	H5
España	3121700	252	82	3127865	3132783	3139190	3144312	3148015
Andalucía	466343	291	103	467729	468985	470554	471866	472615
Aragón	104992	283	94	105189	105331	105518	105657	105819
Asturias	41985	231	63	42084	42138	42247	42344	42403
Canarias	39008	98	35	39141	39246	39349	39425	39520
Cantabria	24112	144	52	24152	24170	24215	24248	24279
Castilla.y.León	203176	307	89	203536	203835	204226	204537	204711
Castilla.La.Mancha	166183	204	49	166382	166580	166783	166923	166961
Cataluña	558088	229	79	559120	559923	560876	561540	562324
Ceuta	4468	372	135	4488	4504	4519	4532	4548
Comunidad.Valenciana	371434	249	62	372101	372881	373629	374204	374242
Extremadura	68550	134	39	68617	68693	68756	68798	68816
Galicia	109147	200	57	109395	109550	109832	110052	110155
Islas.Baleares	55468	114	36	55522	55544	55616	55671	55730
La.Rioja	27298	168	47	27320	27352	27377	27399	27401
Madrid	571228	366	127	572579	573635	574895	575933	577043
Melilla	6732	412	142	6753	6770	6787	6801	6815
Murcia	105271	160	48	105375	105472	105582	105666	105719
Navarra	50733	166	51	50783	50823	50871	50904	50944
País.Vasco	147484	289	99	147824	148048	148367	148615	148884

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

Tabla Ratio Incr. Confirmados: Mod. Lineal.

Last=17/02/2021

	Last	H1	H2	H3	H4	H5
España	0.0023	0.0022	0.0041	0.0057	0.0072	0.0083
Andalucía	0.0032	0.0030	0.0058	0.0080	0.0100	0.0114
Aragón	0.0021	0.0021	0.0039	0.0056	0.0074	0.0088
Asturias	0.0031	0.0019	0.0029	0.0043	0.0058	0.0065
Canarias	0.0033	0.0029	0.0056	0.0082	0.0107	0.0128
Cantabria	0.0021	0.0018	0.0032	0.0048	0.0064	0.0074
Castilla.y.León	0.0020	0.0020	0.0036	0.0050	0.0062	0.0069
Castilla.La.Mancha	0.0013	0.0016	0.0028	0.0036	0.0042	0.0044
Cataluña	0.0019	0.0021	0.0040	0.0056	0.0073	0.0085
Ceuta	0.0044	0.0038	0.0073	0.0109	0.0146	0.0179
Comunidad.Valenciana	0.0018	0.0019	0.0033	0.0042	0.0047	0.0048
Extremadura	0.0011	0.0015	0.0029	0.0037	0.0045	0.0048
Galicia	0.0027	0.0020	0.0033	0.0046	0.0058	0.0062
Islas.Baleares	0.0014	0.0015	0.0027	0.0039	0.0052	0.0061
La.Rioja	0.0011	0.0015	0.0027	0.0035	0.0042	0.0044
Madrid	0.0027	0.0026	0.0048	0.0068	0.0090	0.0108
Melilla	0.0031	0.0029	0.0055	0.0078	0.0100	0.0118
Murcia	0.0013	0.0016	0.0028	0.0038	0.0047	0.0053
Navarra	0.0012	0.0015	0.0027	0.0037	0.0048	0.0056
País.Vasco	0.0026	0.0023	0.0042	0.0062	0.0082	0.0097

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

Tabla Ratio Incr. Confirmados: Mod. No Paramétrico.

Last=17/02/2021

	Last	H1	H2	H3	H4	H5
España	0.0023	0.0039	0.0077	0.0114	0.0151	0.0188
Andalucía	0.0032	0.0049	0.0097	0.0141	0.0187	0.0232
Aragón	0.0021	0.0035	0.0069	0.0103	0.0137	0.0171
Asturias	0.0031	0.0051	0.0100	0.0146	0.0195	0.0241
Canarias	0.0033	0.0045	0.0088	0.0131	0.0174	0.0217
Cantabria	0.0021	0.0034	0.0068	0.0101	0.0134	0.0168
Castilla y León	0.0020	0.0039	0.0076	0.0112	0.0149	0.0185
Castilla-La Mancha	0.0013	0.0032	0.0064	0.0095	0.0126	0.0157
Cataluña	0.0019	0.0032	0.0064	0.0095	0.0127	0.0158
Ceuta	0.0044	0.0054	0.0107	0.0157	0.0211	0.0263
Comunidad Valenciana	0.0018	0.0041	0.0080	0.0117	0.0155	0.0192
Extremadura	0.0011	0.0027	0.0055	0.0082	0.0108	0.0136
Galicia	0.0027	0.0048	0.0094	0.0137	0.0182	0.0226
Islas Baleares	0.0014	0.0029	0.0058	0.0086	0.0114	0.0142
La Rioja	0.0011	0.0029	0.0058	0.0086	0.0114	0.0143
Madrid	0.0027	0.0041	0.0080	0.0118	0.0157	0.0196
Melilla	0.0031	0.0045	0.0089	0.0132	0.0175	0.0218
Murcia	0.0013	0.0029	0.0058	0.0086	0.0114	0.0143
Navarra	0.0012	0.0026	0.0053	0.0078	0.0104	0.0131
País Vasco	0.0026	0.0040	0.0078	0.0117	0.0155	0.0193

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

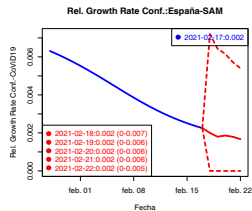
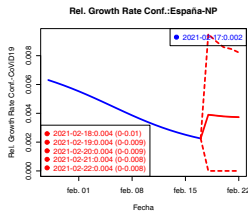
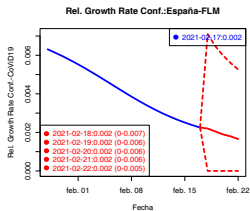
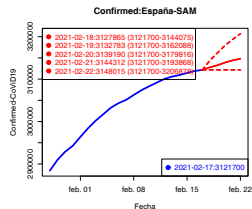
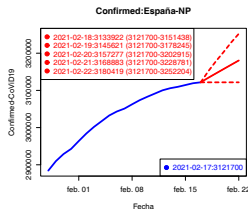
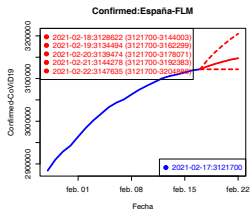
Tabla Ratio Incr. Confirmados: Mod. Aditivo.

Last=17/02/2021

	Last	H1	H2	H3	H4	H5
España	0.0023	0.0020	0.0036	0.0056	0.0072	0.0084
Andalucía	0.0032	0.0030	0.0057	0.0090	0.0118	0.0134
Aragón	0.0021	0.0019	0.0032	0.0050	0.0063	0.0079
Asturias	0.0031	0.0024	0.0036	0.0062	0.0086	0.0100
Canarias	0.0033	0.0034	0.0061	0.0087	0.0107	0.0131
Cantabria	0.0021	0.0017	0.0024	0.0043	0.0056	0.0069
Castilla.y.León	0.0020	0.0018	0.0032	0.0052	0.0067	0.0076
Castilla.La.Mancha	0.0013	0.0012	0.0024	0.0036	0.0045	0.0047
Cataluña	0.0019	0.0018	0.0033	0.0050	0.0062	0.0076
Ceuta	0.0044	0.0044	0.0081	0.0113	0.0143	0.0180
Comunidad.Valenciana	0.0018	0.0018	0.0039	0.0059	0.0075	0.0076
Extremadura	0.0011	0.0010	0.0021	0.0030	0.0036	0.0039
Galicia	0.0027	0.0023	0.0037	0.0063	0.0083	0.0092
Islas.Baleares	0.0014	0.0010	0.0014	0.0027	0.0037	0.0047
La.Rioja	0.0011	0.0008	0.0020	0.0029	0.0037	0.0038
Madrid	0.0027	0.0024	0.0042	0.0064	0.0082	0.0102
Melilla	0.0031	0.0031	0.0056	0.0082	0.0102	0.0124
Murcia	0.0013	0.0010	0.0019	0.0030	0.0037	0.0043
Navarra	0.0012	0.0010	0.0018	0.0027	0.0034	0.0042
País.Vasco	0.0026	0.0023	0.0038	0.0060	0.0077	0.0095

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

Confirmados: España

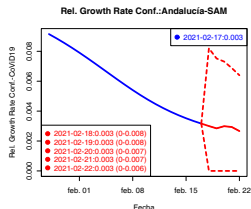
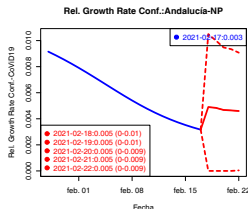
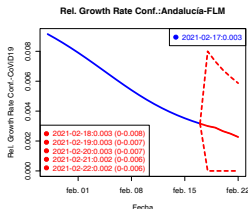
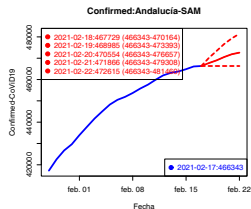
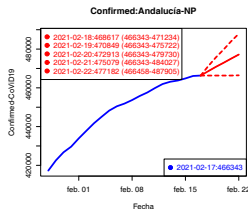
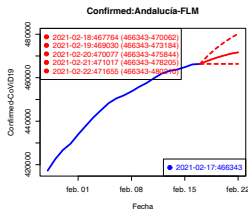


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Andalucía

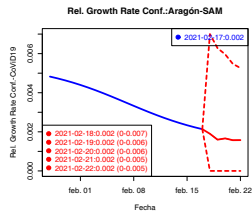
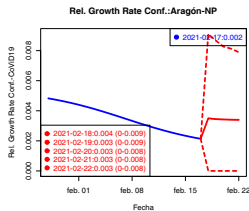
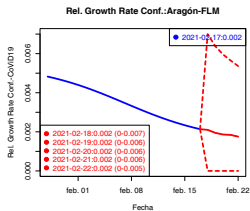
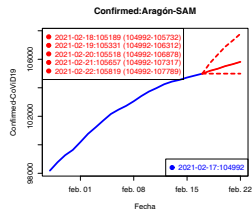
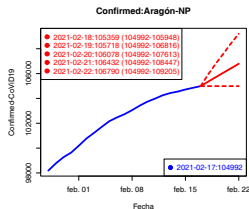
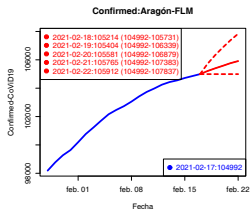


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Aragón

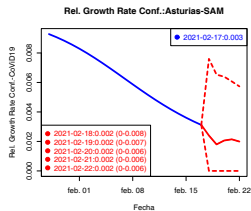
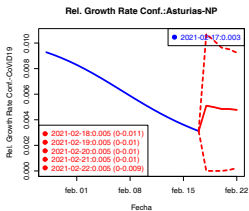
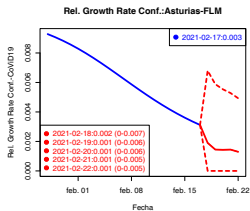
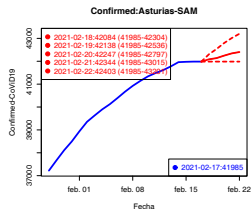
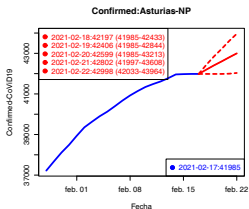
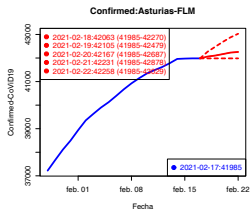


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

← Confirmados

← Fallecidos

Confirmados: Asturias

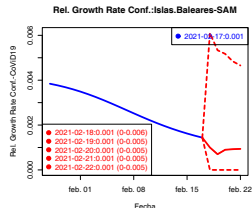
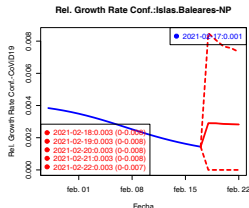
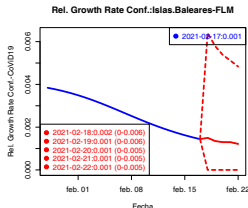
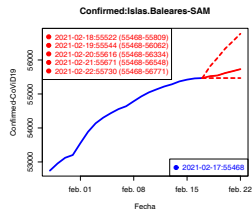
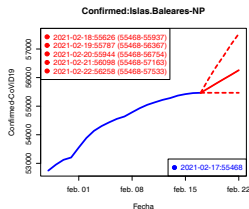
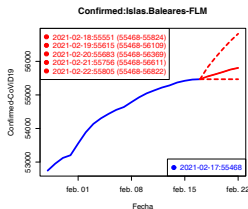


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Islas Baleares

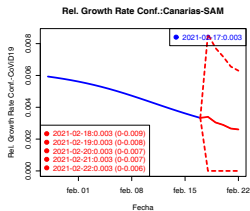
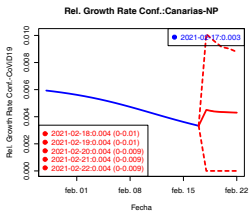
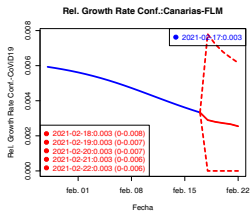
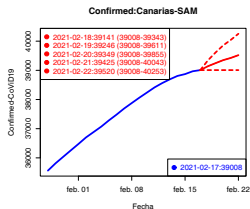
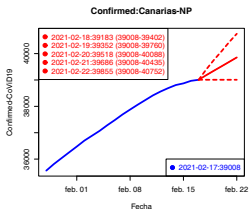
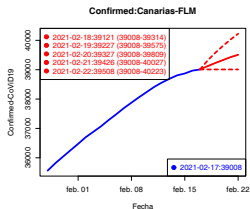


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Canarias



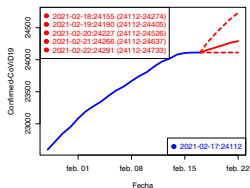
Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

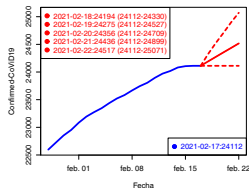
◀ Fallecidos

Confirmados: Cantabria

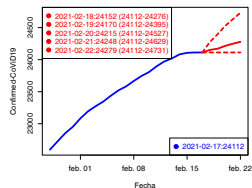
Confirmed:Cantabria-FLM



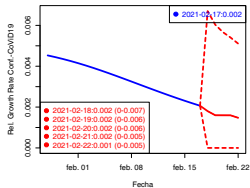
Confirmed:Cantabria-NP



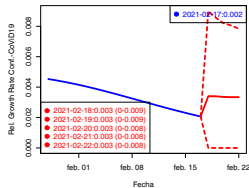
Confirmed:Cantabria-SAM



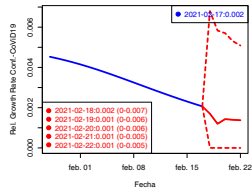
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Rel. Growth Rate Conf.:Cantabria-NP



Rel. Growth Rate Conf.:Cantabria-SAM



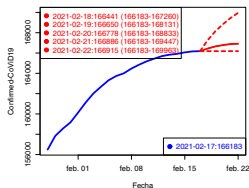
Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

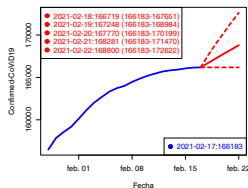
◀ Fallecidos

Confirmados: Castilla-La Mancha

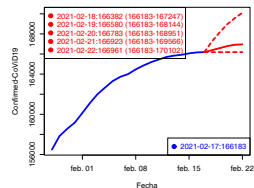
Confirmed:Castilla.La.Mancha-FLM



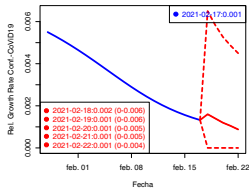
Confirmed:Castilla.La.Mancha-NP



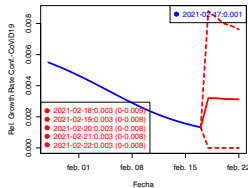
Confirmed:Castilla.La.Mancha-SAM



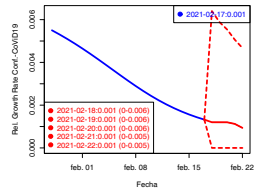
Rel. Growth Rate Conf.:Castilla.La.Mancha-FLM



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



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



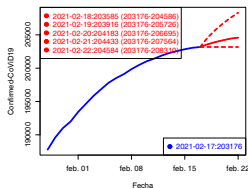
Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

← Confirmados

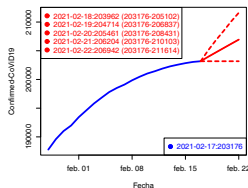
← Fallecidos

Confirmados: Castilla y León

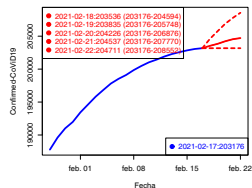
Confirmed:Castilla.y.León-FLM



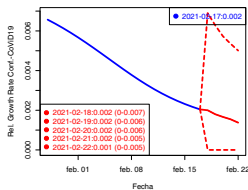
Confirmed:Castilla.y.León-NP



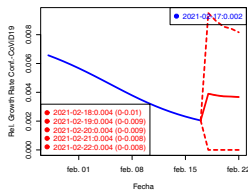
Confirmed:Castilla.y.León-SAM



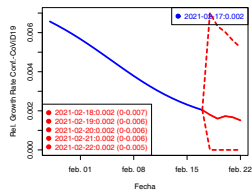
Rel. Growth Rate Conf.:Castilla.y.León-FLM



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



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

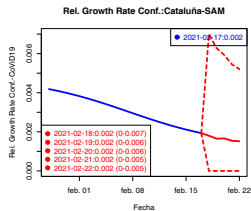
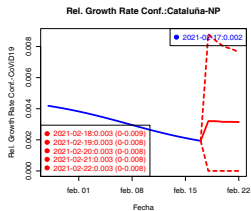
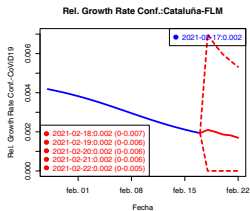
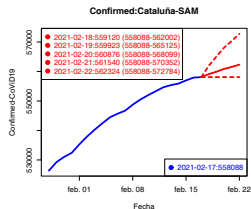
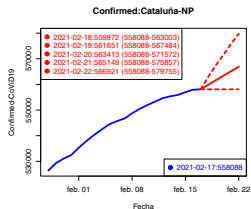
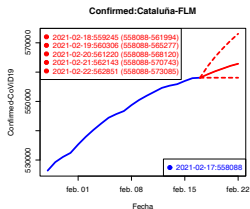


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Cataluña

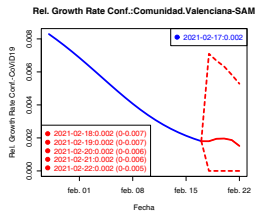
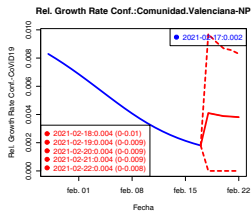
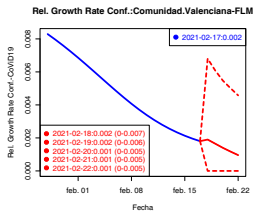
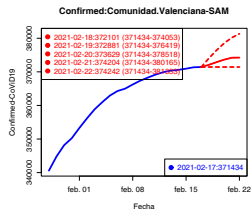
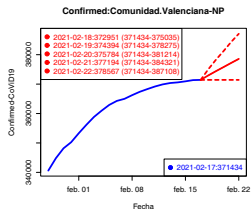
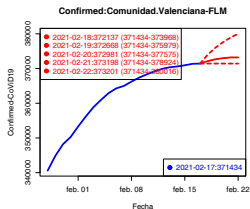


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

← Confirmados

← Fallecidos

Confirmados: C. Valenciana

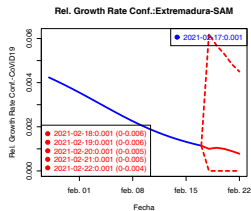
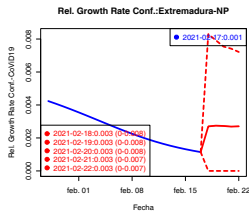
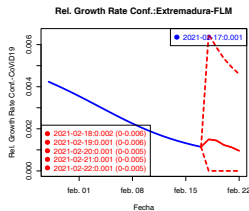
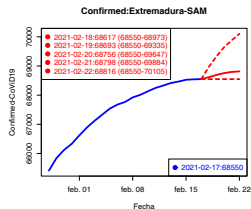
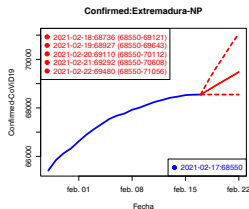
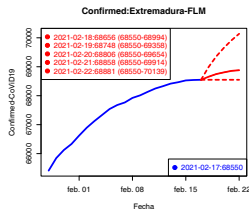


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Extremadura



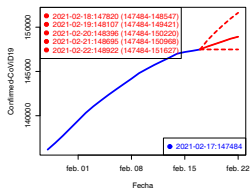
Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

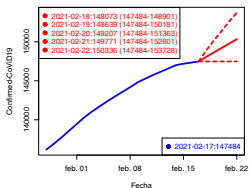
◀ Fallecidos

Confirmados: País Vasco

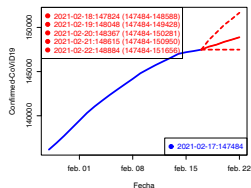
Confirmed:País.Vasco-FLM



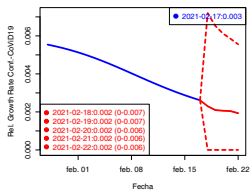
Confirmed:País.Vasco-NP



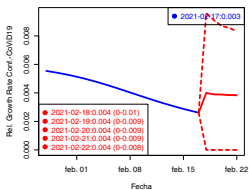
Confirmed:País.Vasco-SAM



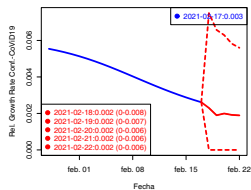
Rel. Growth Rate Conf.:País.Vasco-FLM



Rel. Growth Rate Conf.:País.Vasco-NP



Rel. Growth Rate Conf.:País.Vasco-SAM



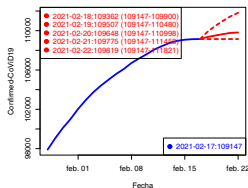
Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

← Confirmados

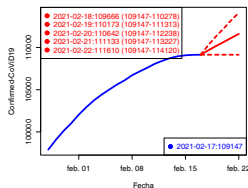
← Fallecidos

Confirmados: Galicia

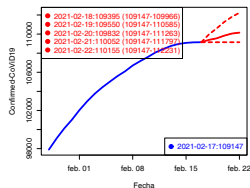
Confirmed:Galicia-FLM



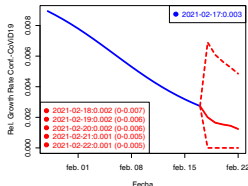
Confirmed:Galicia-NP



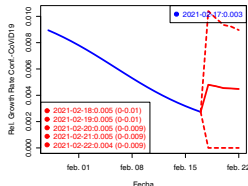
Confirmed:Galicia-SAM



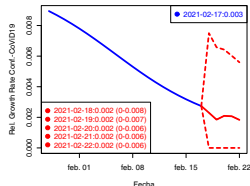
Rel. Growth Rate Conf.:Galicia-FLM



Rel. Growth Rate Conf.:Galicia-NP



Rel. Growth Rate Conf.:Galicia-SAM

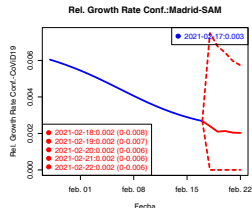
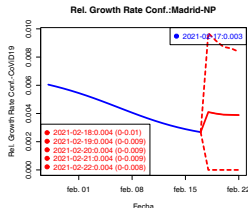
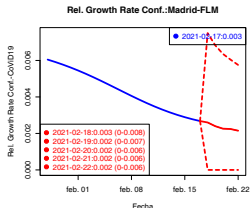
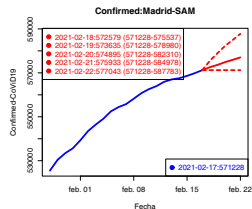
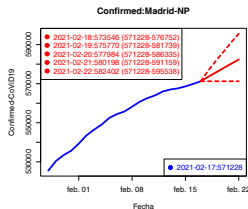
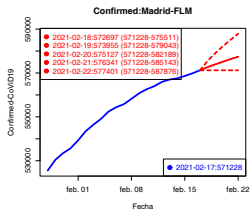


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Madrid

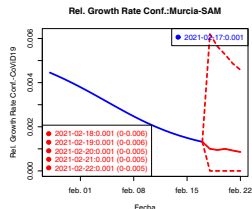
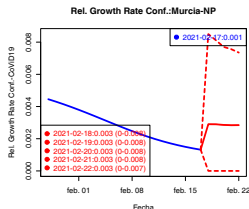
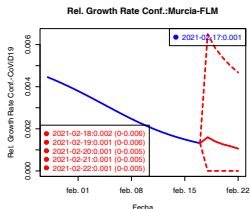
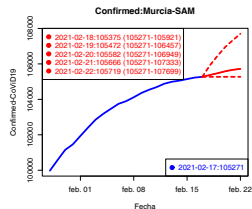
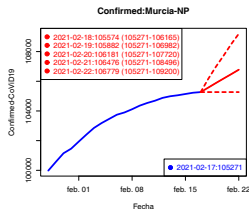
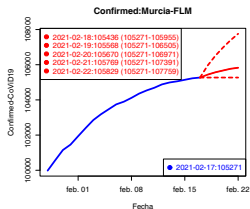


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Murcia



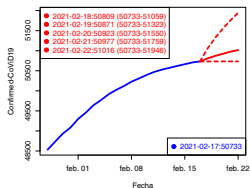
Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

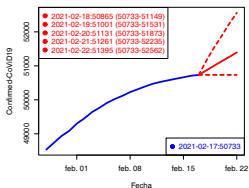
◀ Fallecidos

Confirmados: Navarra

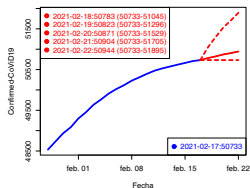
Confirmed:Navarra-FLM



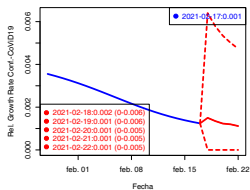
Confirmed:Navarra-NP



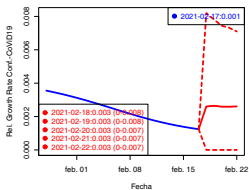
Confirmed:Navarra-SAM



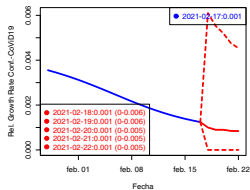
Rel. Growth Rate Conf.:Navarra-FLM



Rel. Growth Rate Conf.:Navarra-NP



Rel. Growth Rate Conf.:Navarra-SAM

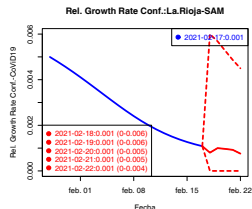
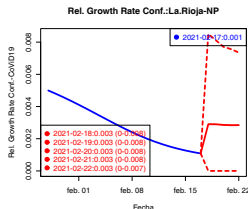
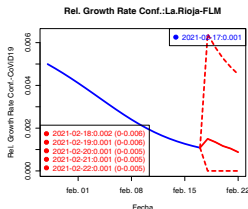
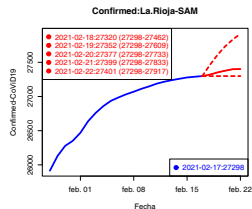
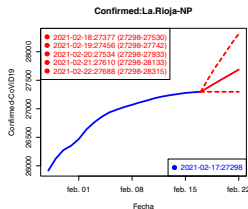
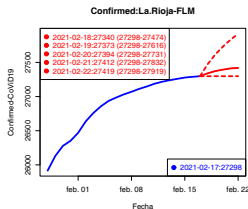


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: La Rioja



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

◀ Confirmados

◀ Fallecidos

Table of Contents

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

Modelos para fallecidos por CoViD-19

Último dato: 17/02/2021 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	0.659	0.633	0.677
H2	0.011	0.012	0.01	0.006	0.007	0.005	0.71	0.675	0.724
H3	0.03	0.032	0.029	0.01	0.013	0.009	0.671	0.64	0.679
H4	0.033	0.039	0.032	0.014	0.021	0.012	0.764	0.726	0.772
H5	0.043	0.053	0.042	0.02	0.031	0.016	0.799	0.757	0.806

Tabla Previsión Fallecidos: Mod. Lineal.

Last=17/02/2021

	Last	H1	H2	H3	H4	H5
España	66320	66492	66639	66798	66904	66976
Andalucía	7796	7828	7854	7882	7904	7920
Aragón	3173	3181	3189	3199	3207	3214
Asturias	1681	1688	1695	1702	1707	1711
Canarias	561	563	566	568	569	571
Cantabria	490	491	492	493	494	494
Castilla.y.León	6155	6169	6181	6197	6205	6211
Castilla.La.Mancha	5449	5460	5468	5479	5485	5489
Cataluña	9911	9922	9929	9941	9946	9949
Ceuta	77	77	78	78	78	78
Comunidad.Valenciana	6182	6213	6241	6262	6280	6289
Extremadura	1657	1662	1666	1671	1675	1677
Galicia	2127	2140	2152	2163	2172	2180
Islas.Baleares	677	679	680	682	683	684
La.Rioja	712	714	716	719	720	722
Madrid	13495	13511	13522	13535	13540	13537
Melilla	64	64	65	66	66	67
Murcia	1379	1387	1395	1399	1404	1406
Navarra	1083	1085	1086	1088	1090	1090
País.Vasco	3651	3658	3664	3673	3678	3682

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

Tabla Previsión Fallecidos: Mod. Aditivo.

Last=17/02/2021

	Last	H1	H2	H3	H4	H5
España	66320	66467	66508	66866	66980	66968
Andalucía	7796	7825	7853	7888	7907	7941
Aragón	3173	3180	3186	3204	3212	3217
Asturias	1681	1686	1691	1703	1706	1708
Canarias	561	563	565	568	569	570
Cantabria	490	491	491	493	493	494
Castilla.y.León	6155	6164	6169	6206	6214	6210
Castilla.La.Mancha	5449	5458	5459	5485	5493	5490
Cataluña	9911	9915	9913	9939	9942	9944
Ceuta	77	77	77	77	77	78
Comunidad.Valenciana	6182	6209	6245	6263	6284	6313
Extremadura	1657	1663	1667	1674	1678	1682
Galicia	2127	2137	2150	2162	2170	2183
Islas.Baleares	677	679	679	682	683	684
La.Rioja	712	714	716	720	721	722
Madrid	13495	13496	13495	13529	13531	13517
Melilla	64	64	65	66	66	67
Murcia	1379	1387	1397	1400	1407	1415
Navarra	1083	1084	1085	1090	1091	1092
País.Vasco	3651	3655	3658	3680	3685	3684

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

Tabla Ratio Incr. Fallecidos: Mod. Lineal.

Last=17/02/2021

	Last	H1	H2	H3	H4	H5
España	0.0031	0.0026	0.0048	0.0072	0.0088	0.0099
Andalucía	0.0054	0.0040	0.0075	0.0110	0.0139	0.0159
Aragón	0.0034	0.0026	0.0050	0.0081	0.0106	0.0130
Asturias	0.0042	0.0043	0.0085	0.0125	0.0154	0.0177
Canarias	0.0037	0.0041	0.0082	0.0118	0.0146	0.0171
Cantabria	0.0023	0.0023	0.0043	0.0060	0.0074	0.0087
Castilla.y.León	0.0028	0.0023	0.0042	0.0068	0.0082	0.0092
Castilla.La.Mancha	0.0027	0.0020	0.0036	0.0055	0.0066	0.0073
Cataluña	0.0010	0.0011	0.0018	0.0030	0.0035	0.0038
Ceuta	0.0032	0.0040	0.0077	0.0083	0.0101	0.0113
Comunidad.Valenciana	0.0062	0.0050	0.0096	0.0130	0.0158	0.0174
Extremadura	0.0042	0.0030	0.0057	0.0087	0.0107	0.0123
Galicia	0.0073	0.0059	0.0116	0.0169	0.0213	0.0248
Islas.Baleares	0.0032	0.0027	0.0051	0.0070	0.0087	0.0098
La.Rioja	0.0039	0.0032	0.0063	0.0095	0.0118	0.0136
Madrid	0.0011	0.0012	0.0020	0.0030	0.0033	0.0031
Melilla	0.0106	0.0068	0.0136	0.0257	0.0347	0.0451
Murcia	0.0068	0.0058	0.0114	0.0147	0.0179	0.0197
Navarra	0.0018	0.0014	0.0026	0.0050	0.0061	0.0069
País.Vasco	0.0023	0.0019	0.0036	0.0060	0.0074	0.0084

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

Tabla Ratio Incr. Fallecidos: Mod. No Paramétrico.

Last=17/02/2021

	Last	H1	H2	H3	H4	H5
España	0.0031	0.0046	0.0090	0.0140	0.0184	0.0229
Andalucía	0.0054	0.0072	0.0143	0.0213	0.0281	0.0350
Aragón	0.0034	0.0041	0.0081	0.0126	0.0167	0.0208
Asturias	0.0042	0.0047	0.0093	0.0144	0.0189	0.0236
Canarias	0.0037	0.0041	0.0081	0.0126	0.0167	0.0208
Cantabria	0.0023	0.0034	0.0066	0.0103	0.0136	0.0172
Castilla y León	0.0028	0.0041	0.0081	0.0127	0.0167	0.0208
Castilla-La Mancha	0.0027	0.0044	0.0088	0.0136	0.0179	0.0222
Cataluña	0.0010	0.0025	0.0048	0.0075	0.0100	0.0128
Ceuta	0.0032	0.0044	0.0087	0.0134	0.0177	0.0220
Comunidad Valenciana	0.0062	0.0080	0.0161	0.0240	0.0317	0.0395
Extremadura	0.0042	0.0059	0.0118	0.0178	0.0234	0.0291
Galicia	0.0073	0.0083	0.0166	0.0248	0.0328	0.0410
Islas Baleares	0.0032	0.0047	0.0093	0.0143	0.0188	0.0234
La Rioja	0.0039	0.0048	0.0096	0.0148	0.0194	0.0242
Madrid	0.0011	0.0029	0.0057	0.0088	0.0117	0.0149
Melilla	0.0106	0.0091	0.0184	0.0278	0.0370	0.0464
Murcia	0.0068	0.0085	0.0172	0.0257	0.0340	0.0422
Navarra	0.0018	0.0030	0.0058	0.0090	0.0120	0.0152
País Vasco	0.0023	0.0037	0.0073	0.0114	0.0150	0.0188

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

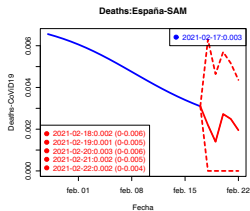
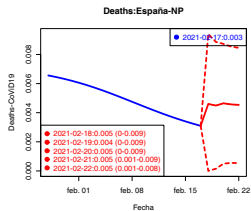
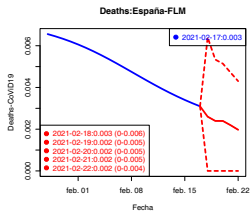
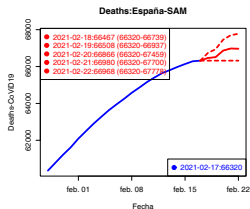
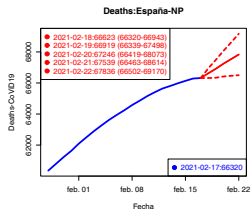
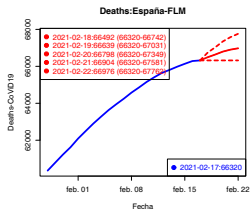
Tabla Ratio Incr. Fallecidos: Mod. Aditivo.

Last=17/02/2021

	Last	H1	H2	H3	H4	H5
España	0.0031	0.0022	0.0028	0.0082	0.0100	0.0098
Andalucía	0.0054	0.0038	0.0073	0.0117	0.0143	0.0186
Aragón	0.0034	0.0022	0.0040	0.0098	0.0124	0.0138
Asturias	0.0042	0.0032	0.0058	0.0131	0.0150	0.0158
Canarias	0.0037	0.0036	0.0068	0.0118	0.0142	0.0166
Cantabria	0.0023	0.0019	0.0028	0.0059	0.0070	0.0081
Castilla.y.León	0.0028	0.0015	0.0022	0.0083	0.0096	0.0090
Castilla.La.Mancha	0.0027	0.0017	0.0018	0.0067	0.0081	0.0076
Cataluña	0.0010	0.0004	0.0002	0.0029	0.0032	0.0033
Ceuta	0.0032	0.0035	0.0040	0.0034	0.0044	0.0072
Comunidad.Valenciana	0.0062	0.0044	0.0102	0.0131	0.0165	0.0212
Extremadura	0.0042	0.0039	0.0058	0.0103	0.0128	0.0151
Galicia	0.0073	0.0047	0.0108	0.0165	0.0204	0.0264
Islas.Baleares	0.0032	0.0025	0.0032	0.0067	0.0090	0.0100
La.Rioja	0.0039	0.0033	0.0051	0.0109	0.0130	0.0141
Madrid	0.0011	0.0001	0.0000	0.0025	0.0027	0.0016
Melilla	0.0106	0.0055	0.0126	0.0250	0.0321	0.0448
Murcia	0.0068	0.0058	0.0129	0.0153	0.0206	0.0259
Navarra	0.0018	0.0008	0.0019	0.0063	0.0076	0.0082
País.Vasco	0.0023	0.0012	0.0020	0.0078	0.0094	0.0089

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

Fallecidos: España

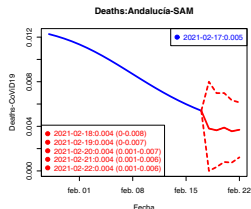
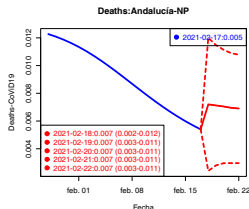
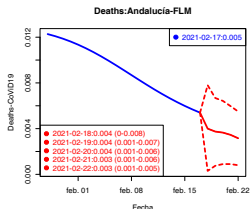
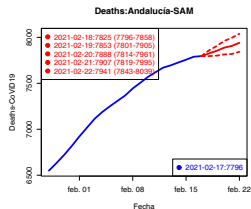
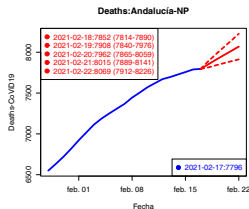
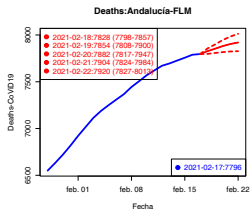


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Andalucía

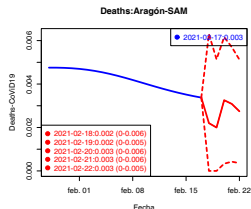
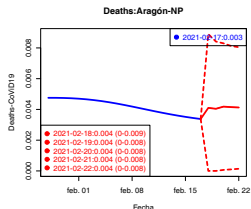
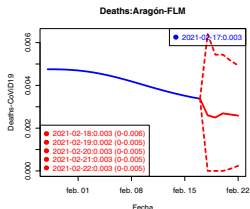
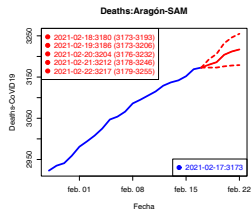
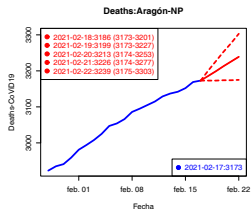
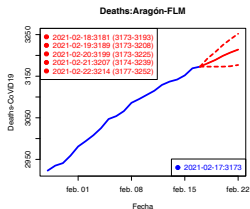


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

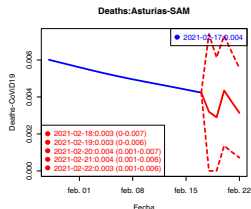
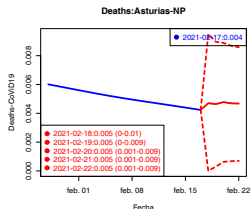
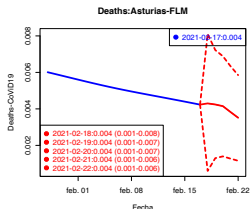
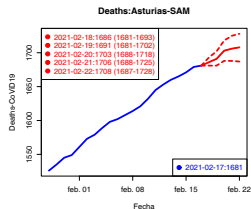
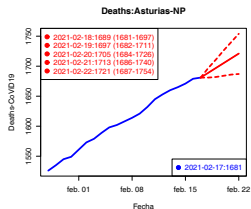
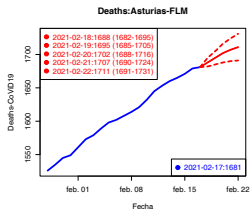
◀ Fallecidos

Fallecidos: Aragón



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

Fallecidos: Asturias

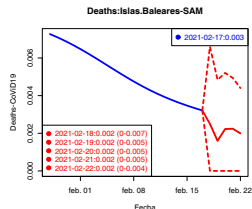
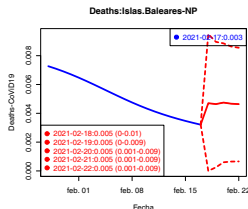
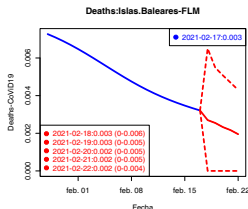
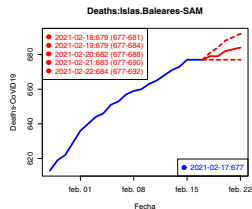
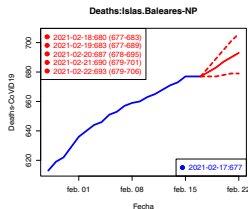
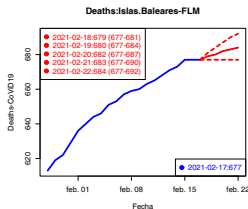


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Islas Baleares

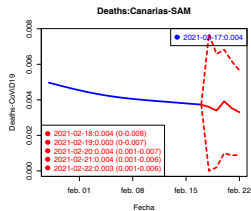
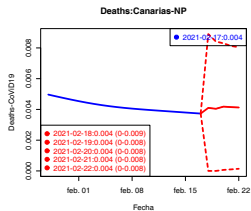
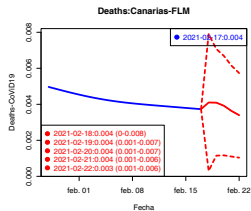
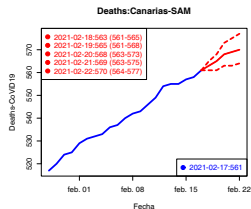
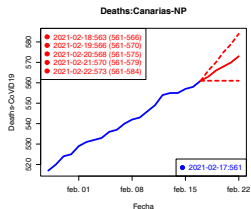
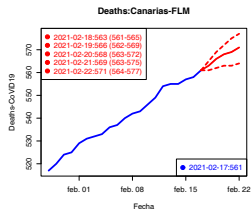


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Canarias

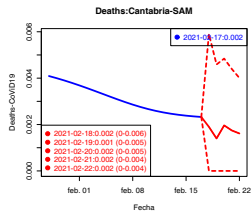
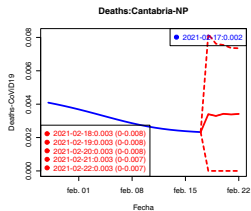
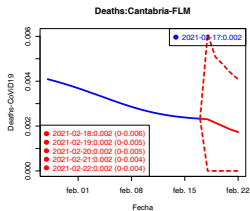
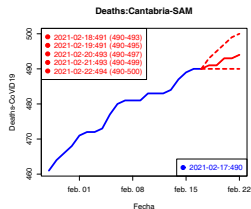
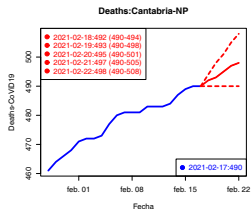
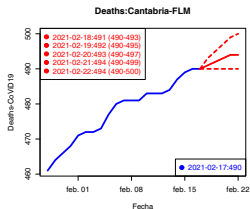


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Cantabria

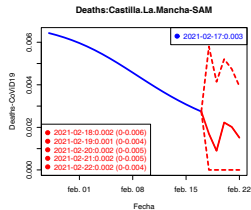
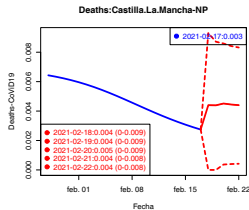
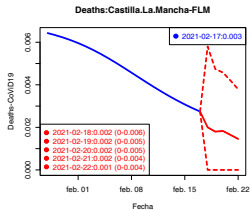
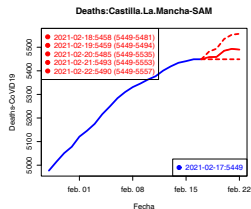
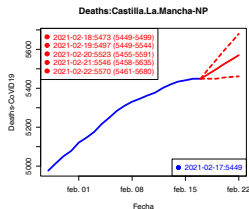
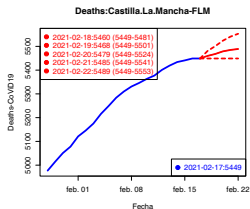


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Castilla-La Mancha

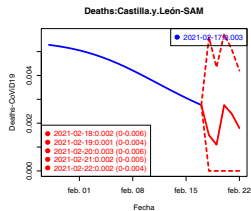
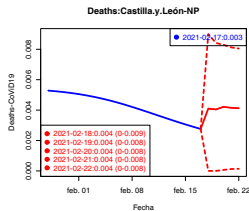
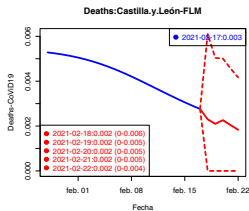
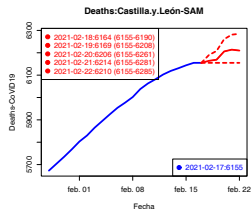
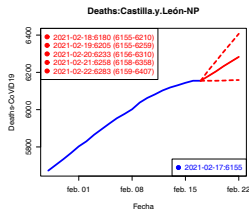
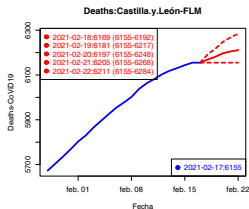


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Castilla y León

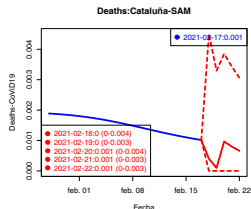
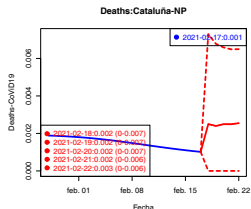
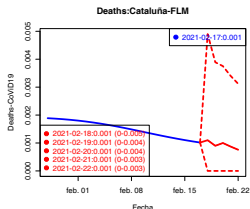
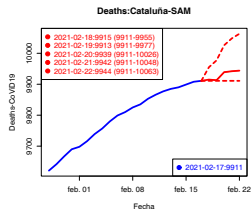
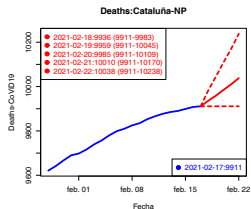
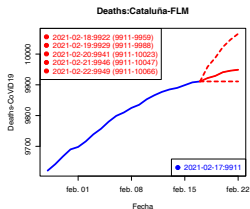


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

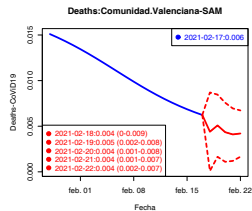
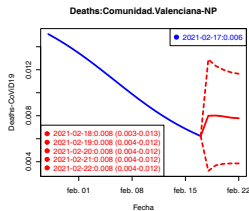
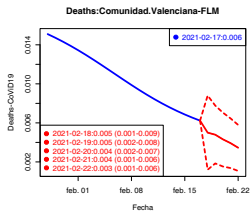
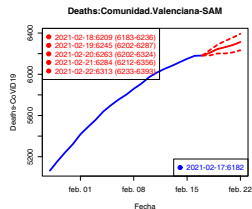
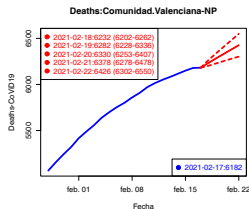
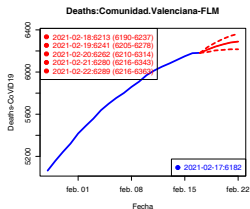
◀ Fallecidos

Fallecidos: Cataluña



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

Fallecidos: C. Valenciana

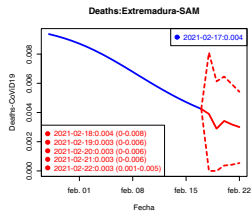
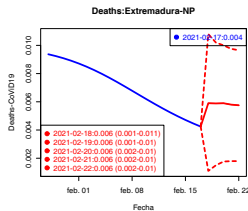
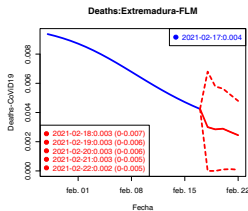
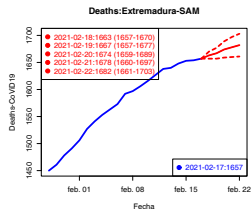
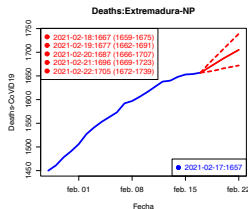
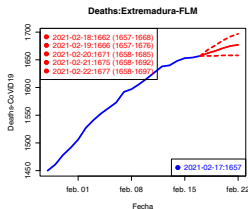


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Extremadura

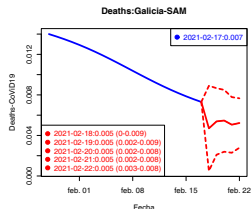
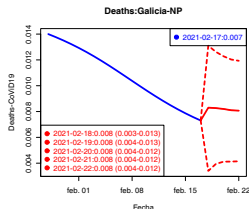
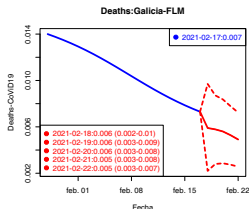
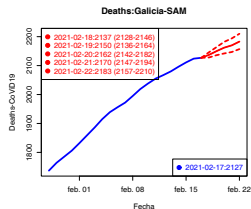
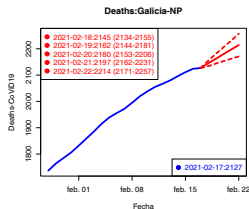
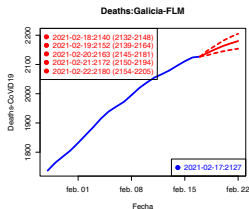


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

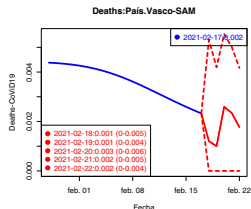
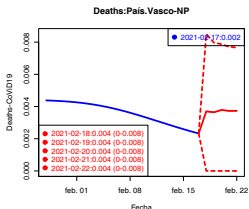
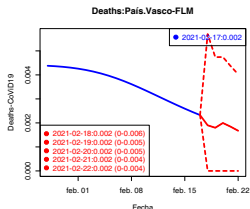
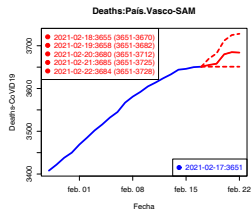
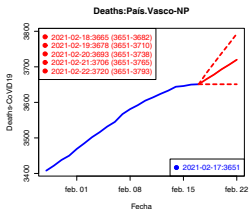
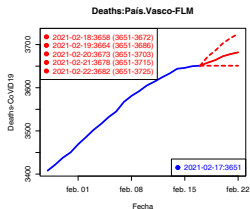
◀ Fallecidos

Fallecidos: Galicia



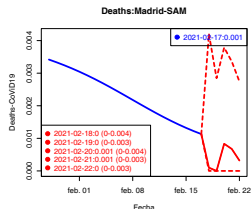
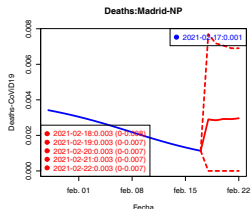
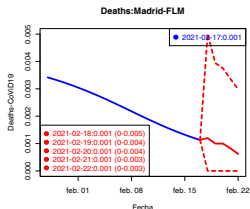
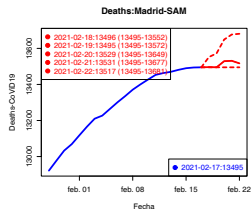
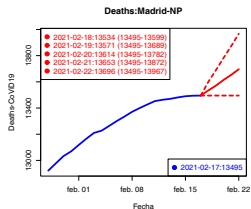
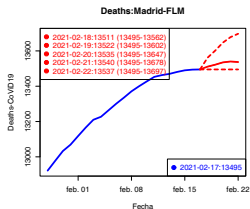
Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

Fallecidos: País Vasco



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

Fallecidos: Madrid

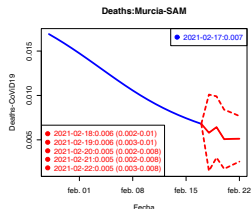
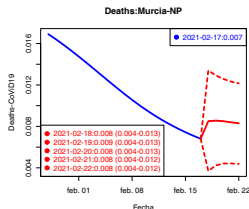
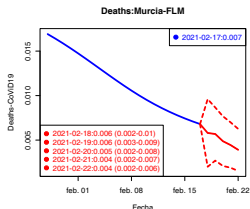
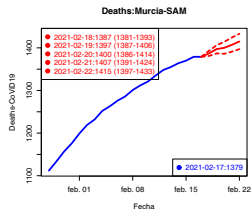
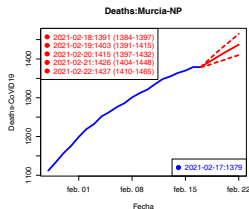
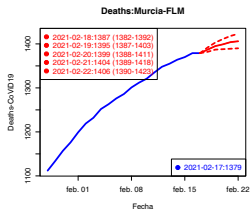


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Murcia

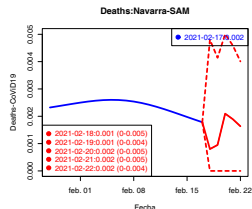
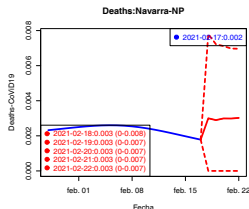
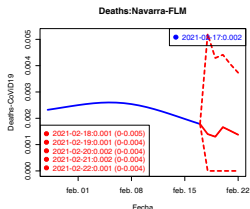
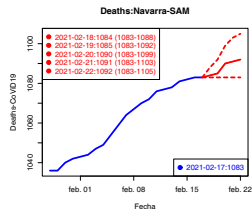
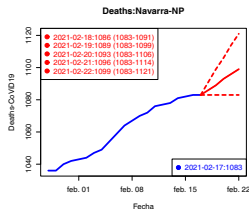
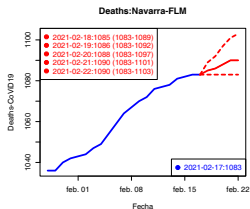


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Navarra

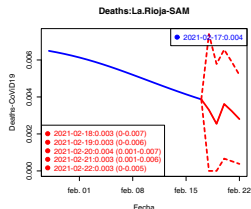
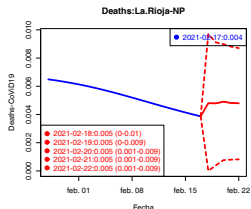
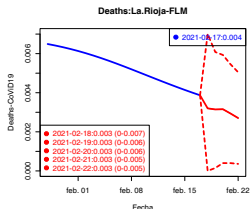
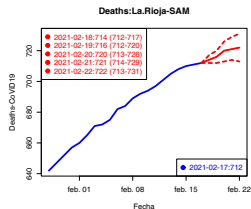
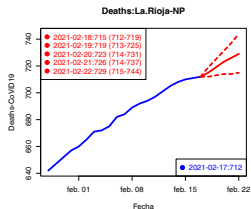
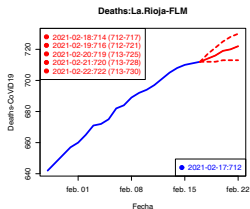


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: La Rioja



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

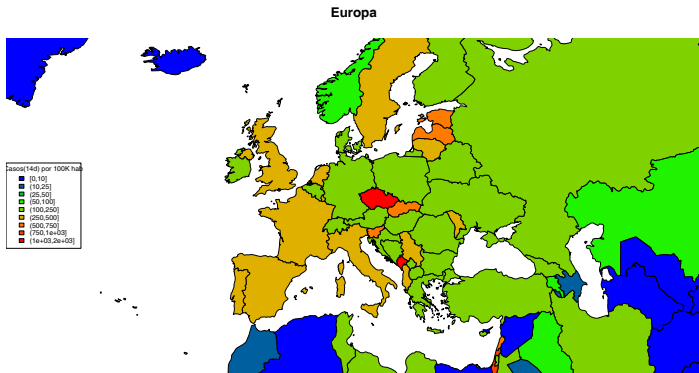
◀ Confirmados

◀ Fallecidos

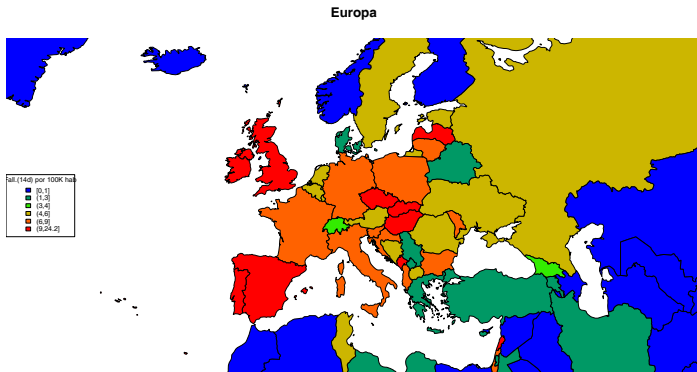
Table of Contents

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

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

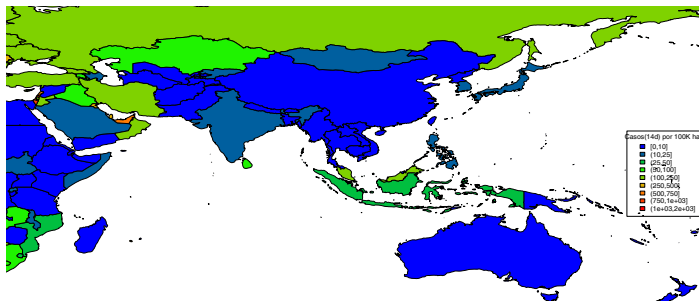


Europa: Fallecidos (14d) por 100K hab.



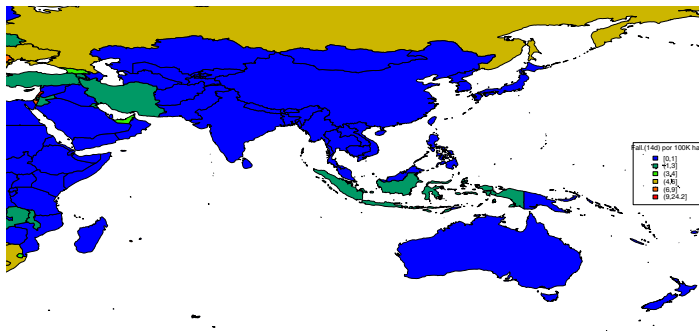
Asia y Oceanía: Incidencia acumulada (14d) por 100K hab.

Asia y Oceanía



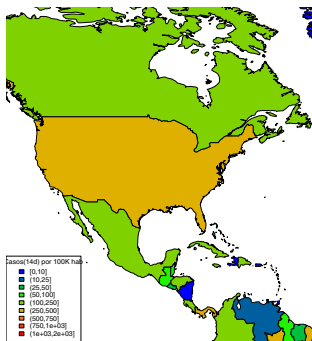
Asia y Oceanía: Fallecidos (14d) por 100K hab.

Asia y Oceanía

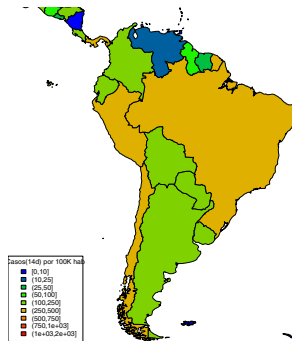


América: Incidencia acumulada (14d) por 100K hab.

América del Norte

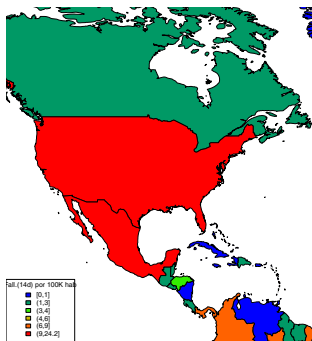


América del sur

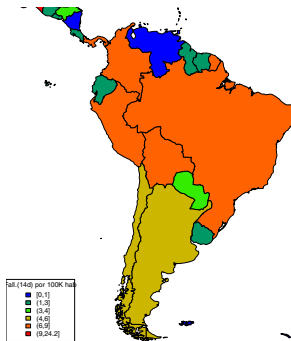


América: Fallecidos (14d) por 100K hab.

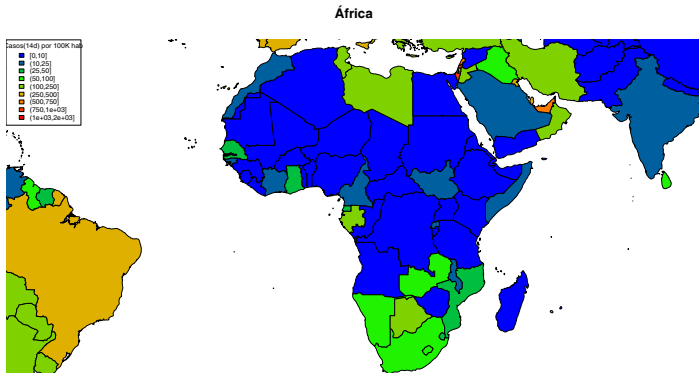
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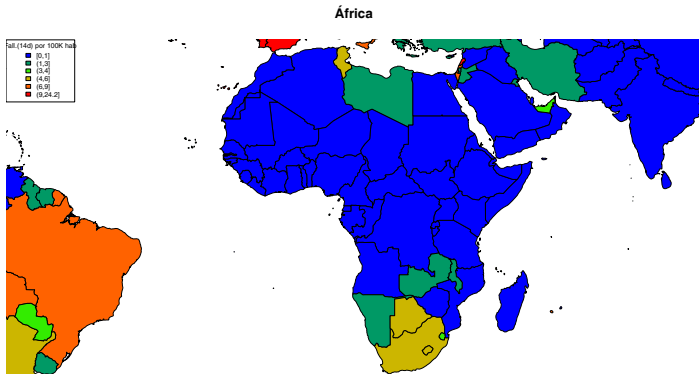
América del sur



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.