

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: 16/02/2021

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: 16/02/2021.

Tabla Previsión Confirmados: Mod. No Paramétrico.

Last=16/02/2021

	Last	IA14	IA7	H1	H2	H3	H4	H5
España	3107212	269	82	3120024	3132242	3144243	3156333	3168279
Andalucía	464484	317	106	466880	469206	471392	473666	475831
Aragón	104743	299	100	105124	105495	105866	106232	106601
Asturias	41791	239	64	42011	42225	42426	42636	42837
Canarias	38894	101	38	39074	39249	39419	39593	39766
Cantabria	24060	149	54	24145	24228	24312	24394	24477
Castilla.y.León	202687	338	95	203521	204316	205094	205878	206651
Castilla.La.Mancha	165604	230	50	166181	166739	167294	167838	168384
Cataluña	553929	228	68	555731	557519	559291	561034	562811
Ceuta	4451	386	147	4476	4500	4524	4548	4572
Comunidad.Valenciana	368386	285	66	369996	371553	372999	374489	375932
Extremadura	68454	150	44	68656	68860	69058	69253	69453
Galicia	108828	218	61	109372	109904	110399	110916	111413
Islas.Baleares	55350	126	39	55516	55683	55846	56007	56172
La.Rioja	27252	192	46	27338	27423	27506	27587	27670
Madrid	568926	380	127	571315	573603	575861	578137	580396
Melilla	6697	418	131	6728	6758	6787	6817	6846
Murcia	105067	177	48	105391	105714	106032	106343	106661
Navarra	50654	181	52	50792	50933	51069	51205	51344
País.Vasco	146955	302	100	147562	148144	148723	149303	149883

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

Tabla Previsión Confirmados: Mod. Aditivo.

Last=16/02/2021

	Last	IA14	IA7	H1	H2	H3	H4	H5
España	3107212	269	82	3114086	3119892	3126733	3131801	3134959
Andalucía	464484	317	106	466186	467950	469695	470955	471584
Aragón	104743	299	100	104961	105125	105321	105461	105622
Asturias	41791	239	64	41906	41981	42085	42174	42232
Canarias	38894	101	38	39035	39148	39263	39352	39454
Cantabria	24060	149	54	24102	24123	24172	24210	24246
Castilla.y.León	202687	338	95	203096	203441	203871	204195	204359
Castilla.La.Mancha	165604	230	50	165851	166120	166346	166478	166472
Cataluña	553929	228	68	554933	555682	556527	556986	557553
Ceuta	4451	386	147	4473	4492	4508	4521	4538
Comunidad.Valenciana	368386	285	66	369224	370219	371058	371578	371573
Extremadura	68454	150	44	68530	68617	68688	68739	68753
Galicia	108828	218	61	109116	109321	109637	109876	109993
Islas.Baleares	55350	126	39	55429	55489	55567	55615	55672
La.Rioja	27252	192	46	27280	27319	27348	27371	27367
Madrid	568926	380	127	570322	571357	572626	573629	574709
Melilla	6697	418	131	6718	6734	6750	6762	6774
Murcia	105067	177	48	105183	105290	105410	105494	105531
Navarra	50654	181	52	50706	50740	50792	50823	50861
País.Vasco	146955	302	100	147332	147602	147928	148171	148441

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

Tabla Ratio Incr. Confirmados: Mod. Lineal.

Last=16/02/2021

	Last	H1	H2	H3	H4	H5
España	0.0023	0.0023	0.0042	0.0058	0.0071	0.0079
Andalucía	0.0033	0.0035	0.0069	0.0091	0.0109	0.0119
Aragón	0.0022	0.0022	0.0041	0.0058	0.0076	0.0089
Asturias	0.0032	0.0018	0.0029	0.0042	0.0056	0.0061
Canarias	0.0035	0.0032	0.0063	0.0091	0.0119	0.0143
Cantabria	0.0022	0.0019	0.0036	0.0053	0.0071	0.0083
Castilla.y.León	0.0022	0.0021	0.0038	0.0051	0.0062	0.0068
Castilla.La.Mancha	0.0014	0.0016	0.0030	0.0036	0.0040	0.0039
Cataluña	0.0018	0.0018	0.0035	0.0048	0.0060	0.0068
Ceuta	0.0047	0.0041	0.0081	0.0119	0.0158	0.0193
Comunidad.Valenciana	0.0020	0.0020	0.0036	0.0044	0.0047	0.0044
Extremadura	0.0013	0.0016	0.0030	0.0039	0.0047	0.0050
Galicia	0.0030	0.0022	0.0038	0.0053	0.0065	0.0069
Islas.Baleares	0.0015	0.0017	0.0033	0.0046	0.0059	0.0067
La.Rioja	0.0011	0.0015	0.0028	0.0034	0.0039	0.0039
Madrid	0.0027	0.0025	0.0046	0.0065	0.0085	0.0102
Melilla	0.0030	0.0025	0.0048	0.0067	0.0086	0.0099
Murcia	0.0014	0.0016	0.0028	0.0037	0.0045	0.0049
Navarra	0.0013	0.0014	0.0026	0.0035	0.0046	0.0052
País.Vasco	0.0027	0.0024	0.0045	0.0065	0.0085	0.0100

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

Tabla Ratio Incr. Confirmados: Mod. No Paramétrico.

Last=16/02/2021

	Last	H1	H2	H3	H4	H5
España	0.0023	0.0041	0.0081	0.0119	0.0158	0.0197
Andalucía	0.0033	0.0052	0.0102	0.0149	0.0198	0.0244
Aragón	0.0022	0.0036	0.0072	0.0107	0.0142	0.0177
Asturias	0.0032	0.0053	0.0104	0.0152	0.0202	0.0250
Canarias	0.0035	0.0046	0.0091	0.0135	0.0180	0.0224
Cantabria	0.0022	0.0035	0.0070	0.0105	0.0139	0.0173
Castilla.y.León	0.0022	0.0041	0.0080	0.0119	0.0157	0.0196
Castilla.La.Mancha	0.0014	0.0035	0.0069	0.0102	0.0135	0.0168
Cataluña	0.0018	0.0033	0.0065	0.0097	0.0128	0.0160
Ceuta	0.0047	0.0056	0.0111	0.0163	0.0218	0.0273
Comunidad.Valenciana	0.0020	0.0044	0.0086	0.0125	0.0166	0.0205
Extremadura	0.0013	0.0029	0.0059	0.0088	0.0117	0.0146
Galicia	0.0030	0.0050	0.0099	0.0144	0.0192	0.0238
Islas.Baleares	0.0015	0.0030	0.0060	0.0090	0.0119	0.0149
La.Rioja	0.0011	0.0031	0.0063	0.0093	0.0123	0.0153
Madrid	0.0027	0.0042	0.0082	0.0122	0.0162	0.0202
Melilla	0.0030	0.0046	0.0091	0.0134	0.0179	0.0223
Murcia	0.0014	0.0031	0.0062	0.0092	0.0121	0.0152
Navarra	0.0013	0.0027	0.0055	0.0082	0.0109	0.0136
País.Vasco	0.0027	0.0041	0.0081	0.0120	0.0160	0.0199

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

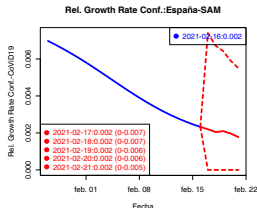
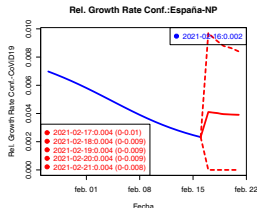
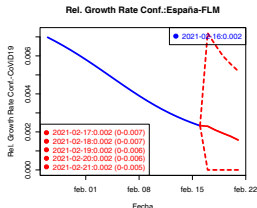
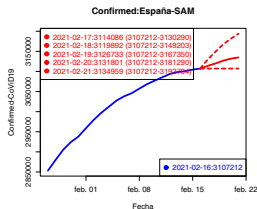
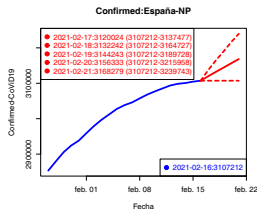
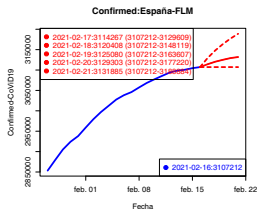
Tabla Ratio Incr. Confirmados: Mod. Aditivo.

Last=16/02/2021

	Last	H1	H2	H3	H4	H5
España	0.0023	0.0022	0.0041	0.0063	0.0079	0.0089
Andalucía	0.0033	0.0037	0.0075	0.0112	0.0139	0.0153
Aragón	0.0022	0.0021	0.0036	0.0055	0.0069	0.0084
Asturias	0.0032	0.0027	0.0046	0.0070	0.0092	0.0106
Canarias	0.0035	0.0036	0.0065	0.0095	0.0118	0.0144
Cantabria	0.0022	0.0018	0.0026	0.0046	0.0062	0.0077
Castilla.y.León	0.0022	0.0020	0.0037	0.0058	0.0074	0.0082
Castilla.La.Mancha	0.0014	0.0015	0.0031	0.0045	0.0053	0.0052
Cataluña	0.0018	0.0018	0.0032	0.0047	0.0055	0.0065
Ceuta	0.0047	0.0049	0.0093	0.0127	0.0156	0.0196
Comunidad.Valenciana	0.0020	0.0023	0.0050	0.0073	0.0087	0.0087
Extremadura	0.0013	0.0011	0.0024	0.0034	0.0042	0.0044
Galicia	0.0030	0.0026	0.0045	0.0074	0.0096	0.0107
Islas.Baleares	0.0015	0.0014	0.0025	0.0039	0.0048	0.0058
La.Rioja	0.0011	0.0010	0.0025	0.0035	0.0043	0.0042
Madrid	0.0027	0.0025	0.0043	0.0065	0.0083	0.0102
Melilla	0.0030	0.0031	0.0055	0.0079	0.0097	0.0114
Murcia	0.0014	0.0011	0.0021	0.0033	0.0041	0.0044
Navarra	0.0013	0.0010	0.0017	0.0027	0.0033	0.0041
País.Vasco	0.0027	0.0026	0.0044	0.0066	0.0083	0.0101

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

Confirmados: España

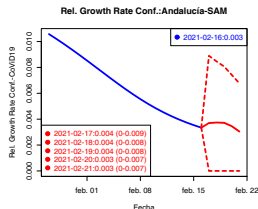
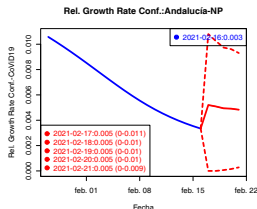
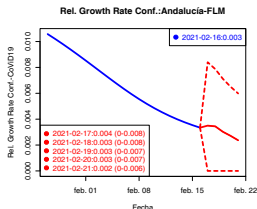
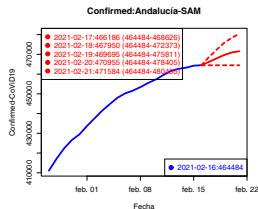
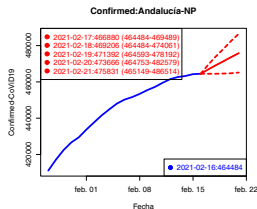
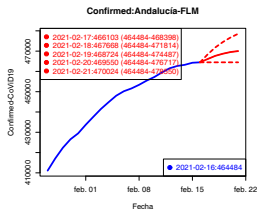


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Andalucía



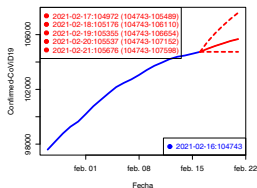
Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

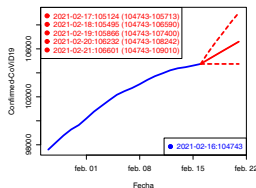
◀ Fallecidos

Confirmados: Aragón

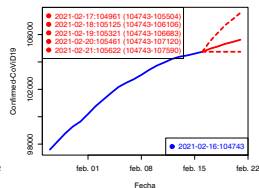
Confirmed:Aragón-FLM



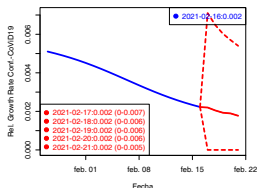
Confirmed:Aragón-NP



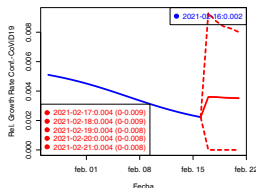
Confirmed:Aragón-SAM



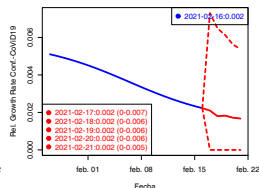
Rel. Growth Rate Conf.:Aragón-FLM



Rel. Growth Rate Conf.:Aragón-NP



Rel. Growth Rate Conf.:Aragón-SAM

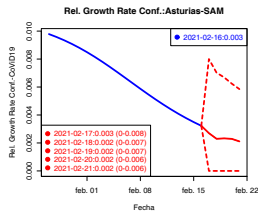
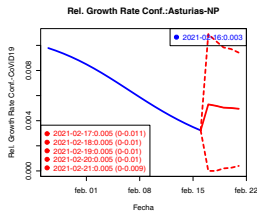
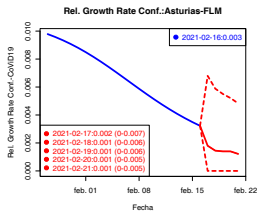
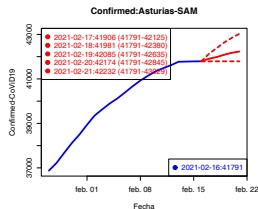
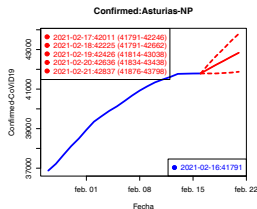
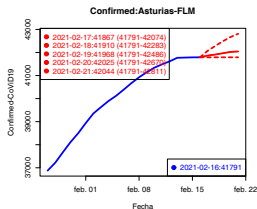


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

← Confirmados

← Fallecidos

Confirmados: Asturias

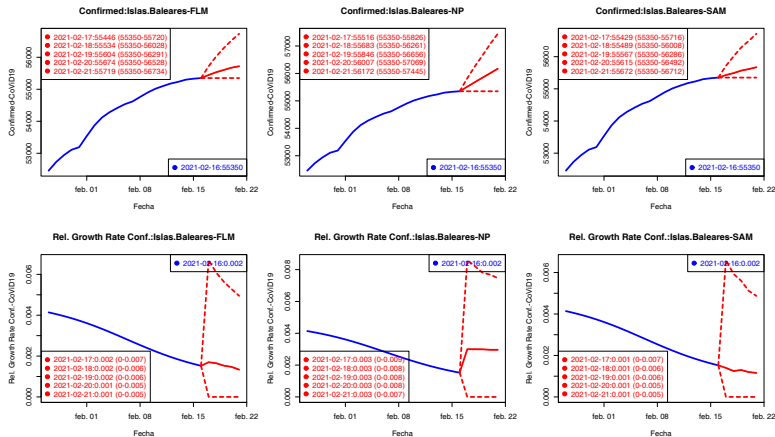


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Islas Baleares

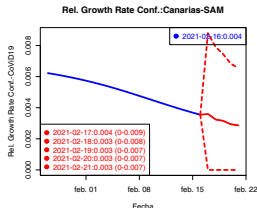
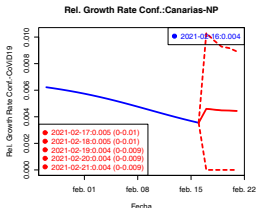
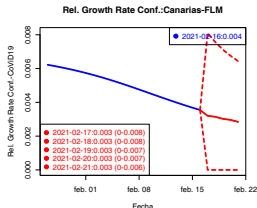
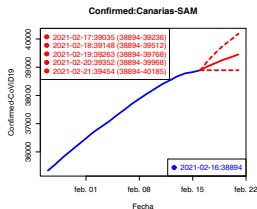
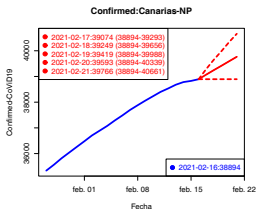
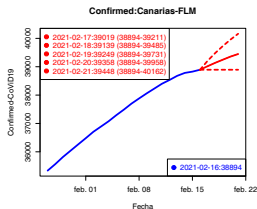


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Canarias

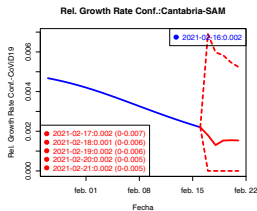
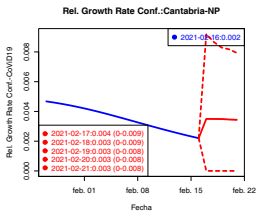
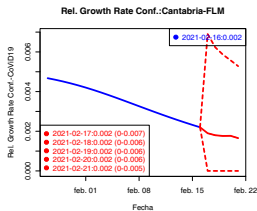
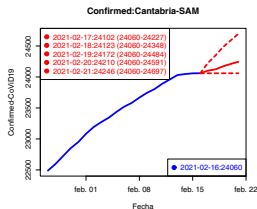
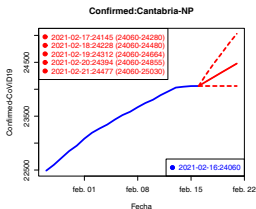
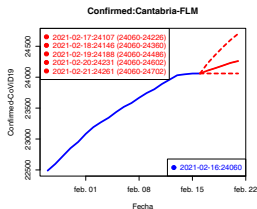


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Cantabria

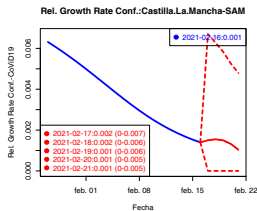
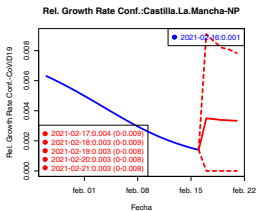
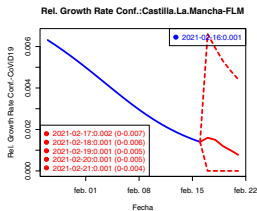
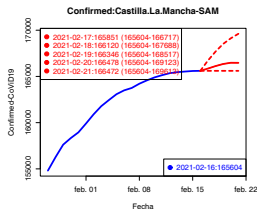
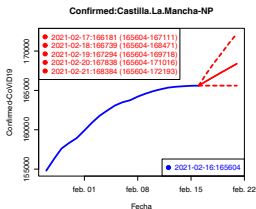
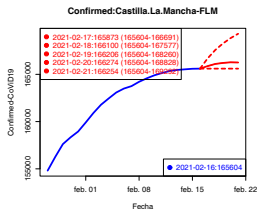


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Castilla-La Mancha



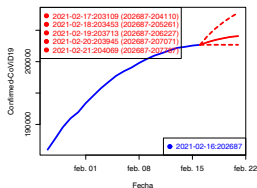
Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

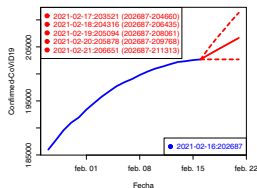
◀ Fallecidos

Confirmados: Castilla y León

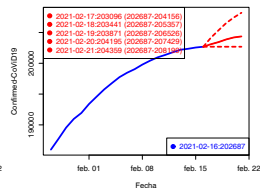
Confirmed:Castilla.y.León-FLM



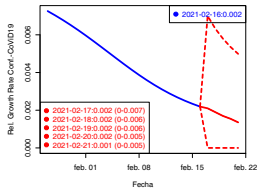
Confirmed:Castilla.y.León-NP



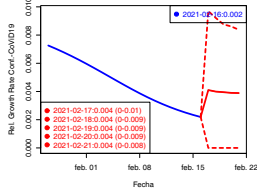
Confirmed:Castilla.y.León-SAM



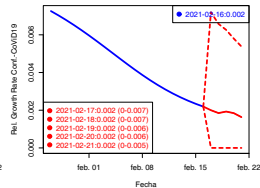
Rel. Growth Rate Conf.:Castilla.y.León-FLM



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



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

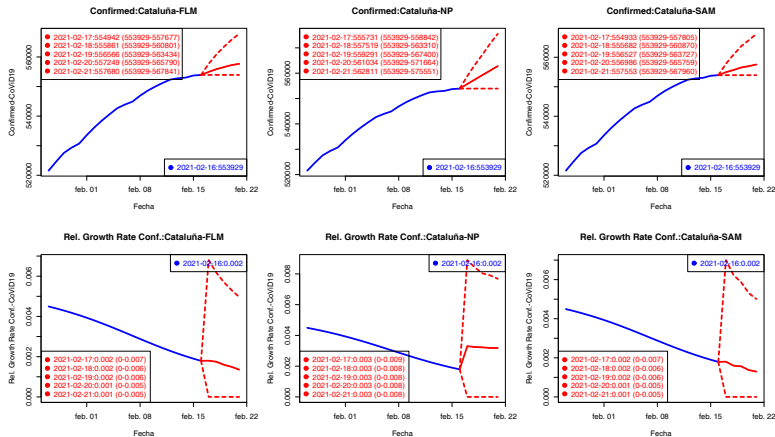


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Cataluña

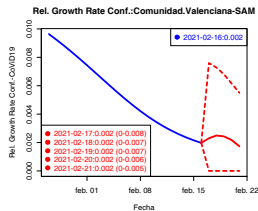
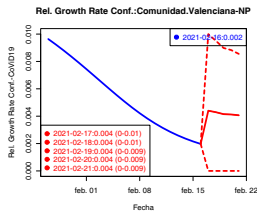
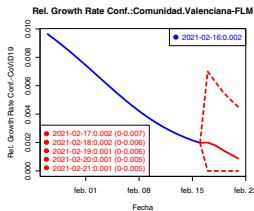
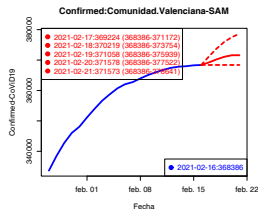
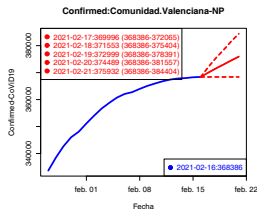
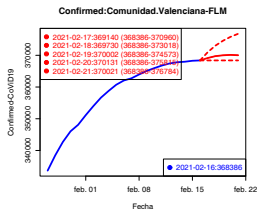


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: C. Valenciana



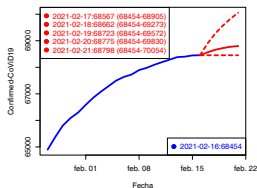
Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

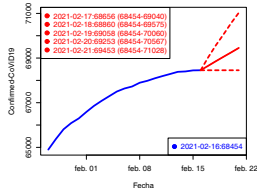
◀ Fallecidos

Confirmados: Extremadura

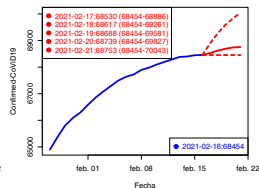
Confirmed:Extremadura-FLM



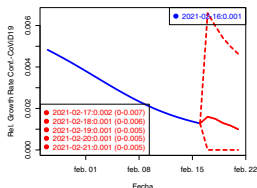
Confirmed:Extremadura-NP



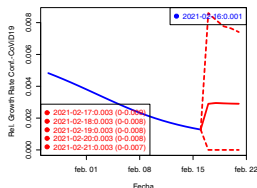
Confirmed:Extremadura-SAM



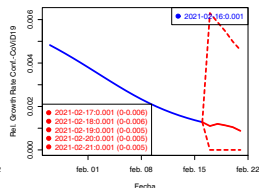
Rel. Growth Rate Conf.:Extremadura-FLM



Rel. Growth Rate Conf.:Extremadura-NP



Rel. Growth Rate Conf.:Extremadura-SAM

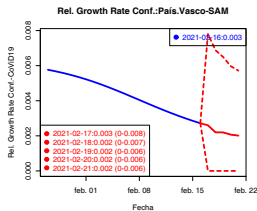
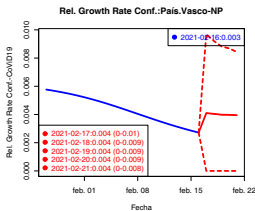
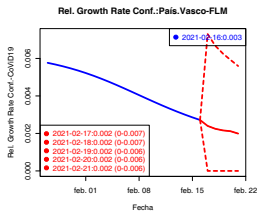
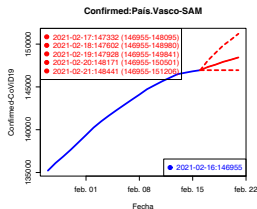
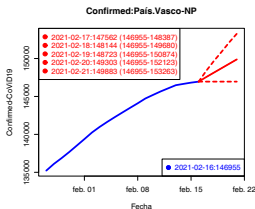
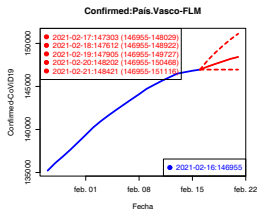


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: País Vasco

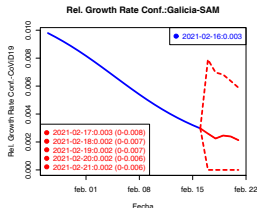
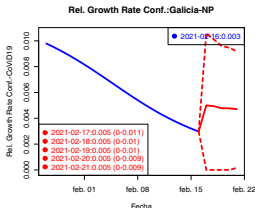
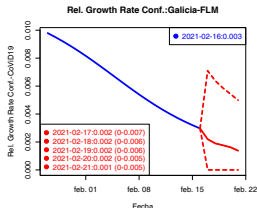
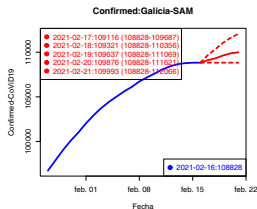
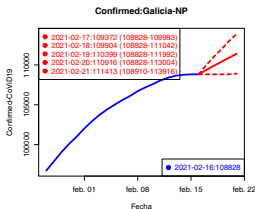
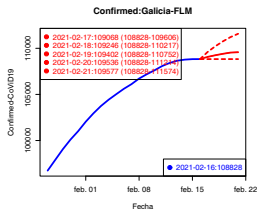


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Galicia

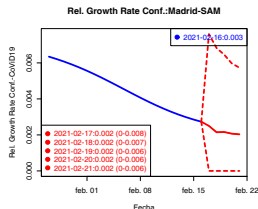
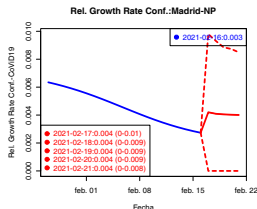
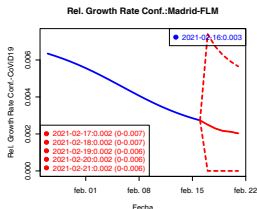
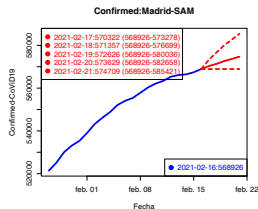
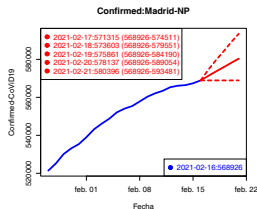
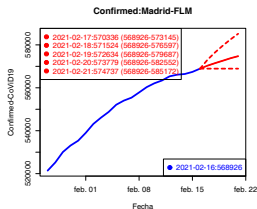


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Madrid

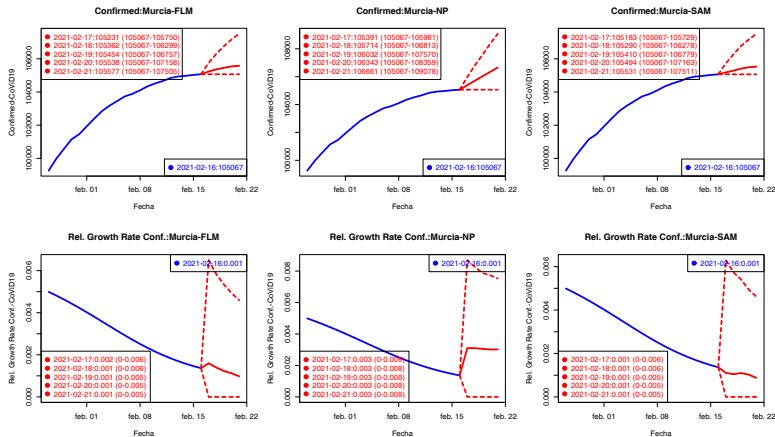


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Murcia



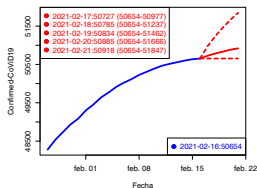
Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

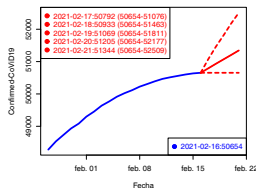
◀ Fallecidos

Confirmados: Navarra

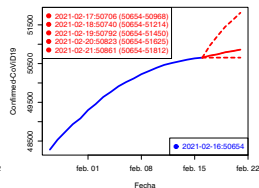
Confirmed:Navarra-FLM



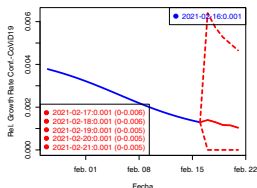
Confirmed:Navarra-NP



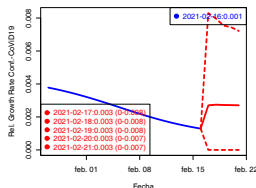
Confirmed:Navarra-SAM



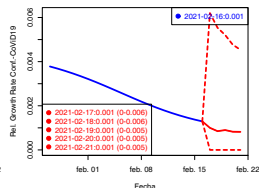
Rel. Growth Rate Conf.:Navarra-FLM



Rel. Growth Rate Conf.:Navarra-NP



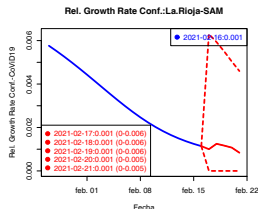
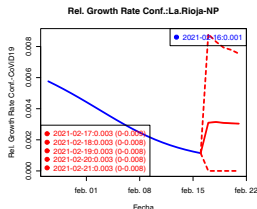
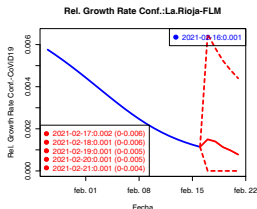
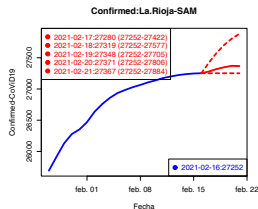
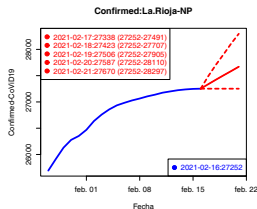
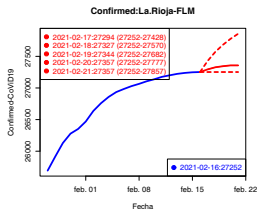
Rel. Growth Rate Conf.:Navarra-SAM



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

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 - Predicciones
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- 3 Panorama internacional

Modelos para fallecidos por CoViD-19

Último dato: 16/02/2021 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	0.013	0.764	0.726	0.772
H5	0.044	0.053	0.042	0.02	0.031	0.016	0.799	0.757	0.806

Tabla Previsión Fallecidos: Mod. Lineal.

Last=16/02/2021

	Last	H1	H2	H3	H4	H5
España	65936	66117	66273	66436	66543	66611
Andalucía	7712	7746	7774	7800	7821	7834
Aragón	3155	3163	3171	3181	3188	3194
Asturias	1678	1686	1693	1700	1706	1711
Canarias	558	560	563	564	566	567
Cantabria	490	491	493	493	494	495
Castilla.y.León	6144	6160	6174	6192	6202	6210
Castilla.La.Mancha	5433	5445	5456	5467	5473	5476
Cataluña	9851	9861	9867	9878	9881	9880
Ceuta	76	76	76	76	76	76
Comunidad.Valenciana	6090	6124	6155	6177	6195	6205
Extremadura	1651	1657	1662	1668	1672	1674
Galicia	2116	2129	2142	2154	2165	2174
Islas.Baleares	674	676	677	678	679	680
La.Rioja	711	713	715	718	720	722
Madrid	13442	13457	13466	13478	13481	13477
Melilla	62	62	63	64	64	64
Murcia	1365	1373	1380	1385	1390	1393
Navarra	1083	1085	1088	1090	1092	1093
País.Vasco	3645	3653	3661	3671	3676	3681

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

Tabla Previsión Fallecidos: Mod. Aditivo.

Last=16/02/2021

	Last	H1	H2	H3	H4	H5
España	65936	66092	66140	66540	66641	66596
Andalucía	7712	7744	7777	7806	7821	7857
Aragón	3155	3162	3167	3188	3195	3197
Asturias	1678	1684	1688	1700	1705	1707
Canarias	558	560	562	564	566	567
Cantabria	490	491	492	493	493	494
Castilla.y.León	6144	6155	6161	6206	6213	6208
Castilla.La.Mancha	5433	5444	5446	5477	5483	5477
Cataluña	9851	9853	9851	9880	9880	9875
Ceuta	76	76	76	76	76	76
Comunidad.Valenciana	6090	6121	6160	6179	6197	6227
Extremadura	1651	1658	1662	1670	1674	1679
Galicia	2116	2126	2140	2152	2161	2176
Islas.Baleares	674	676	676	678	680	681
La.Rioja	711	713	715	720	721	722
Madrid	13442	13442	13442	13477	13477	13456
Melilla	62	62	63	63	64	64
Murcia	1365	1373	1382	1387	1393	1402
Navarra	1083	1084	1086	1090	1092	1093
País.Vasco	3645	3651	3655	3679	3684	3682

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

Tabla Ratio Incr. Fallecidos: Mod. Lineal.

Last=16/02/2021

	Last	H1	H2	H3	H4	H5
España	0.0032	0.0028	0.0051	0.0076	0.0092	0.0102
Andalucía	0.0055	0.0044	0.0080	0.0114	0.0141	0.0159
Aragón	0.0032	0.0026	0.0050	0.0082	0.0104	0.0125
Asturias	0.0046	0.0046	0.0091	0.0132	0.0165	0.0194
Canarias	0.0036	0.0041	0.0082	0.0116	0.0141	0.0161
Cantabria	0.0026	0.0027	0.0052	0.0068	0.0083	0.0097
Castilla.y.León	0.0030	0.0026	0.0049	0.0078	0.0095	0.0107
Castilla.La.Mancha	0.0029	0.0023	0.0042	0.0063	0.0074	0.0079
Cataluña	0.0009	0.0010	0.0016	0.0027	0.0030	0.0030
Ceuta	0.0019	0.0029	0.0054	0.0049	0.0052	0.0039
Comunidad.Valenciana	0.0067	0.0056	0.0107	0.0142	0.0172	0.0188
Extremadura	0.0047	0.0036	0.0069	0.0101	0.0124	0.0140
Galicia	0.0079	0.0062	0.0121	0.0181	0.0231	0.0274
Islas.Baleares	0.0033	0.0025	0.0046	0.0063	0.0079	0.0092
La.Rioja	0.0042	0.0031	0.0059	0.0097	0.0124	0.0149
Madrid	0.0011	0.0011	0.0018	0.0026	0.0029	0.0026
Melilla	0.0082	0.0077	0.0168	0.0273	0.0324	0.0352
Murcia	0.0073	0.0057	0.0111	0.0147	0.0183	0.0208
Navarra	0.0021	0.0021	0.0042	0.0067	0.0079	0.0088
País.Vasco	0.0026	0.0023	0.0043	0.0071	0.0086	0.0098

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

Tabla Ratio Incr. Fallecidos: Mod. No Paramétrico.

Last=16/02/2021

	Last	H1	H2	H3	H4	H5
España	0.0032	0.0047	0.0093	0.0143	0.0189	0.0235
Andalucía	0.0055	0.0074	0.0147	0.0219	0.0289	0.0360
Aragón	0.0032	0.0041	0.0082	0.0127	0.0168	0.0210
Asturias	0.0046	0.0048	0.0096	0.0148	0.0195	0.0243
Canarias	0.0036	0.0042	0.0083	0.0128	0.0170	0.0211
Cantabria	0.0026	0.0036	0.0071	0.0111	0.0147	0.0184
Castilla y León	0.0030	0.0042	0.0084	0.0130	0.0172	0.0214
Castilla-La Mancha	0.0029	0.0046	0.0091	0.0141	0.0186	0.0231
Cataluña	0.0009	0.0025	0.0048	0.0074	0.0099	0.0128
Ceuta	0.0019	0.0045	0.0089	0.0138	0.0181	0.0225
Comunidad Valenciana	0.0067	0.0085	0.0171	0.0255	0.0337	0.0419
Extremadura	0.0047	0.0063	0.0125	0.0188	0.0247	0.0307
Galicia	0.0079	0.0086	0.0173	0.0259	0.0342	0.0427
Islas Baleares	0.0033	0.0048	0.0096	0.0147	0.0194	0.0241
La Rioja	0.0042	0.0049	0.0097	0.0150	0.0197	0.0245
Madrid	0.0011	0.0029	0.0057	0.0088	0.0117	0.0149
Melilla	0.0082	0.0090	0.0182	0.0275	0.0364	0.0454
Murcia	0.0073	0.0089	0.0181	0.0272	0.0358	0.0445
Navarra	0.0021	0.0031	0.0061	0.0094	0.0125	0.0159
País Vasco	0.0026	0.0038	0.0075	0.0117	0.0155	0.0194

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

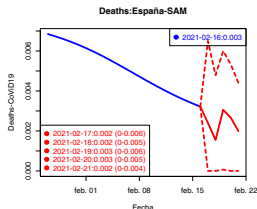
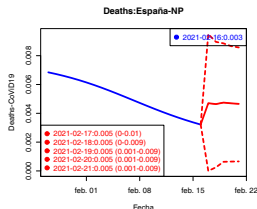
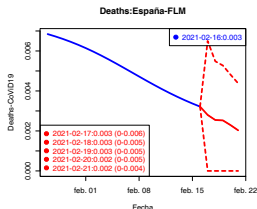
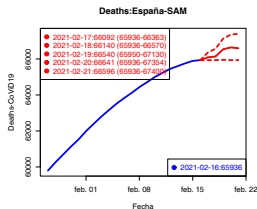
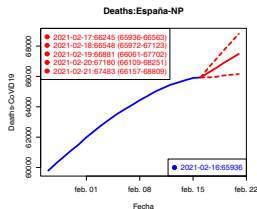
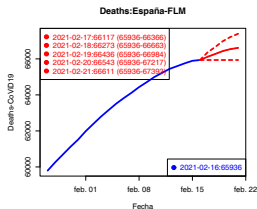
Tabla Ratio Incr. Fallecidos: Mod. Aditivo.

Last=16/02/2021

	Last	H1	H2	H3	H4	H5
España	0.0032	0.0024	0.0031	0.0092	0.0107	0.0100
Andalucía	0.0055	0.0042	0.0084	0.0122	0.0142	0.0188
Aragón	0.0032	0.0021	0.0038	0.0105	0.0125	0.0133
Asturias	0.0046	0.0035	0.0062	0.0134	0.0159	0.0170
Canarias	0.0036	0.0037	0.0067	0.0115	0.0138	0.0155
Cantabria	0.0026	0.0023	0.0033	0.0053	0.0069	0.0081
Castilla.y.León	0.0030	0.0018	0.0028	0.0102	0.0112	0.0104
Castilla.La.Mancha	0.0029	0.0020	0.0024	0.0082	0.0092	0.0081
Cataluña	0.0009	0.0002	0.0000	0.0030	0.0029	0.0024
Ceuta	0.0019	0.0030	0.0039	0.0022	0.0035	0.0047
Comunidad.Valenciana	0.0067	0.0051	0.0115	0.0146	0.0175	0.0226
Extremadura	0.0047	0.0043	0.0068	0.0117	0.0140	0.0167
Galicia	0.0079	0.0050	0.0113	0.0171	0.0215	0.0283
Islas.Baleares	0.0033	0.0025	0.0031	0.0063	0.0089	0.0098
La.Rioja	0.0042	0.0032	0.0051	0.0127	0.0146	0.0158
Madrid	0.0011	0.0000	0.0000	0.0026	0.0026	0.0010
Melilla	0.0082	0.0054	0.0153	0.0227	0.0277	0.0379
Murcia	0.0073	0.0058	0.0125	0.0159	0.0209	0.0270
Navarra	0.0021	0.0012	0.0027	0.0069	0.0079	0.0091
País.Vasco	0.0026	0.0015	0.0027	0.0094	0.0108	0.0103

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

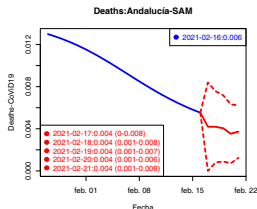
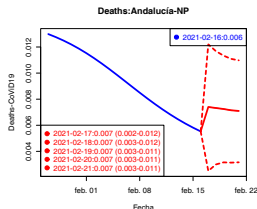
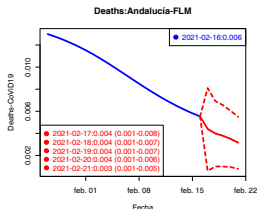
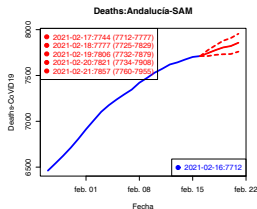
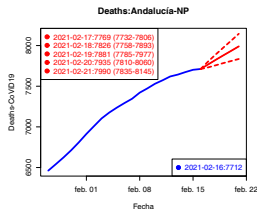
Fallecidos: España



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

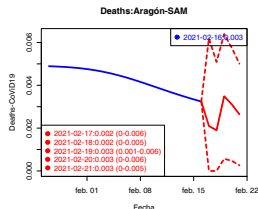
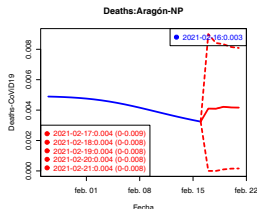
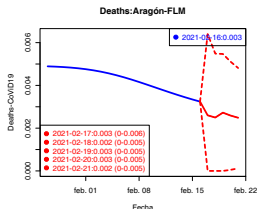
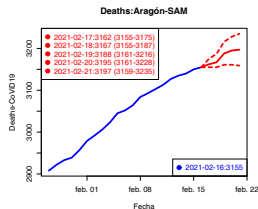
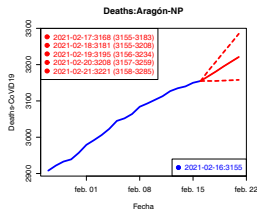
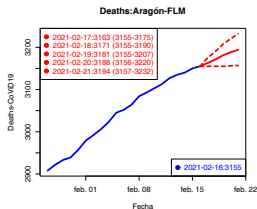
◀ Confirmados

◀ Fallecidos



◀ Confirmados ▶ Fallecidos

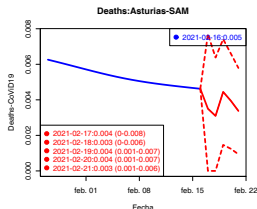
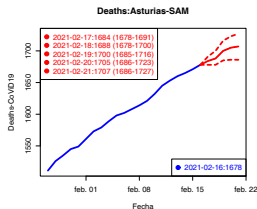
Fallecidos: Aragón



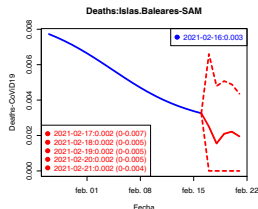
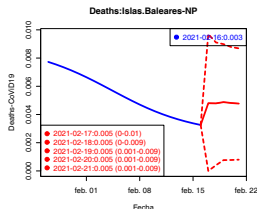
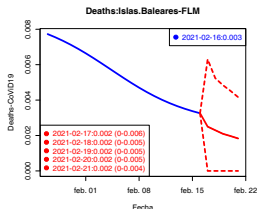
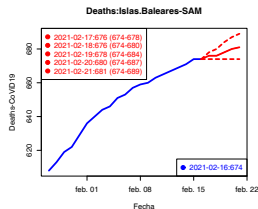
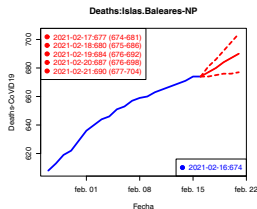
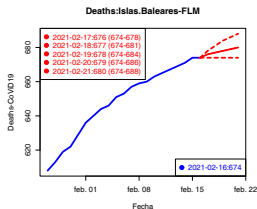
Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

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

◀ Fallecidos



Fallecidos: Islas Baleares

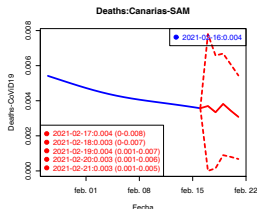
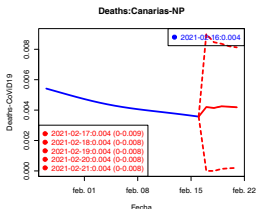
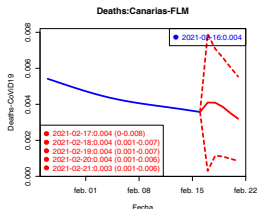
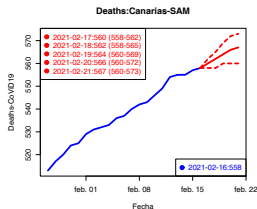
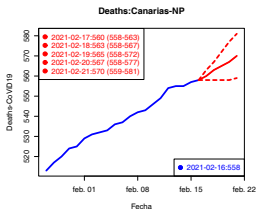
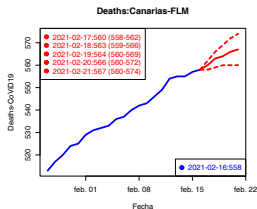


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Canarias

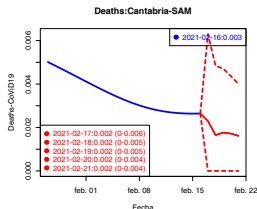
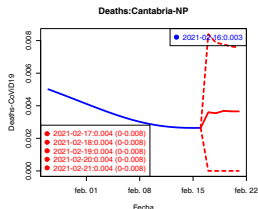
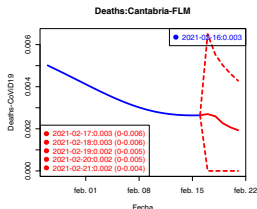
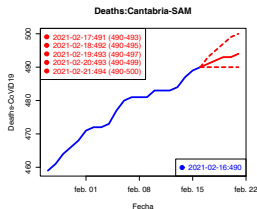
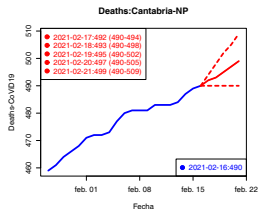
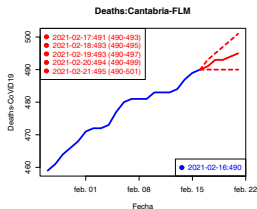


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Cantabria

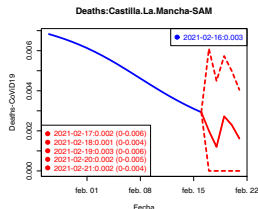
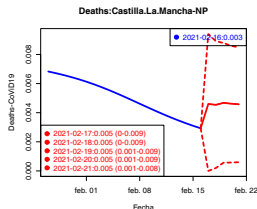
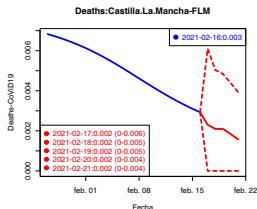
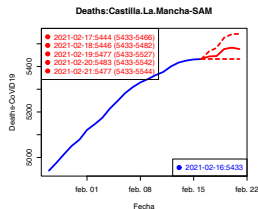
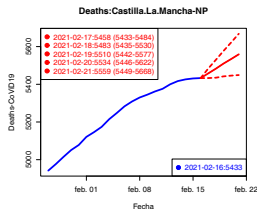
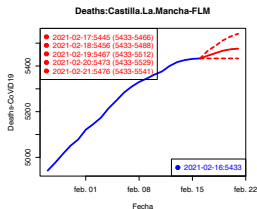


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Castilla-La Mancha

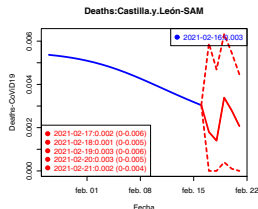
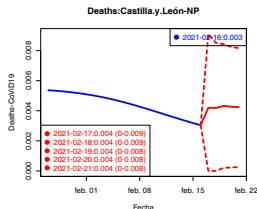
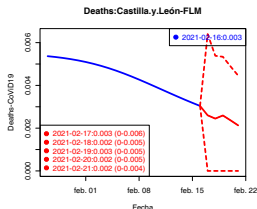
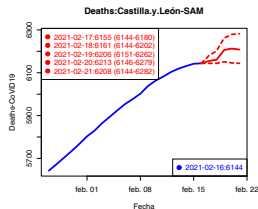
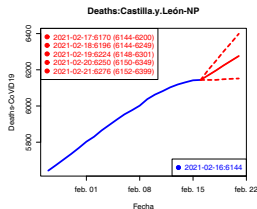
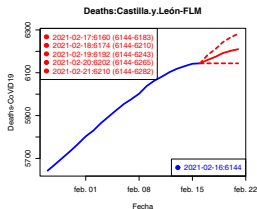


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Castilla y León

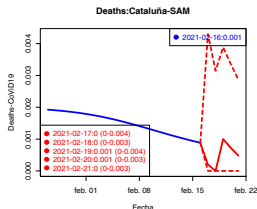
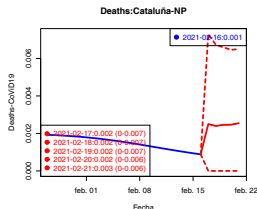
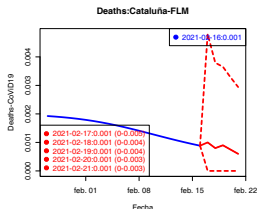
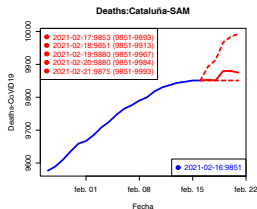
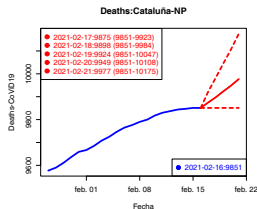
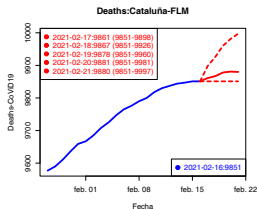


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Cataluña

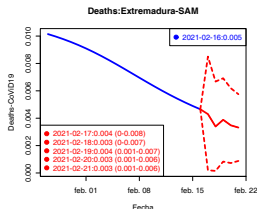
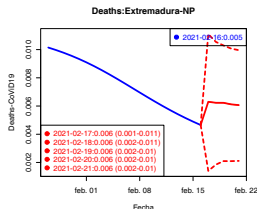
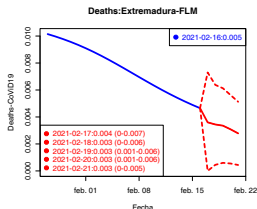
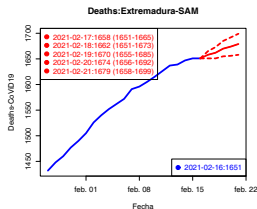
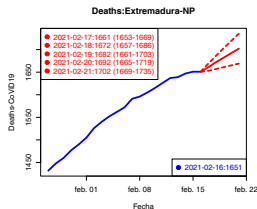
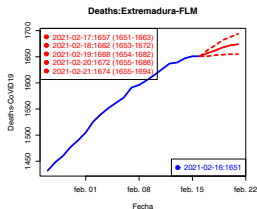


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

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◀ Fallecidos

Fallecidos: Extremadura

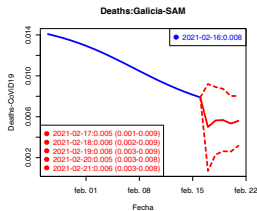
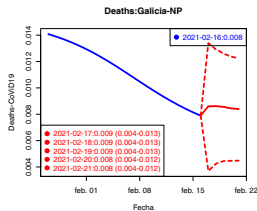
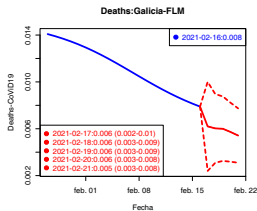
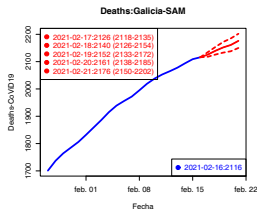
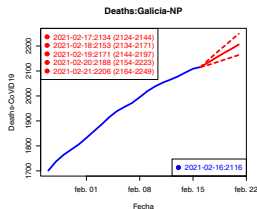
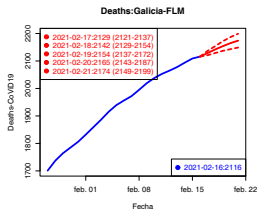


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Galicia

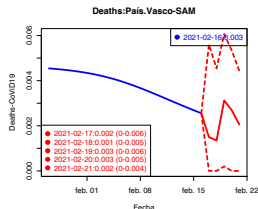
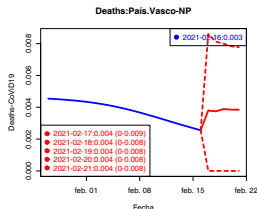
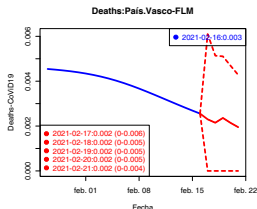
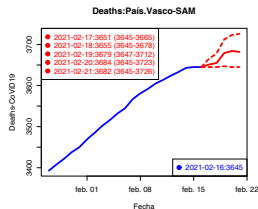
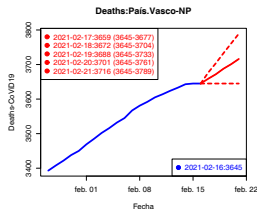
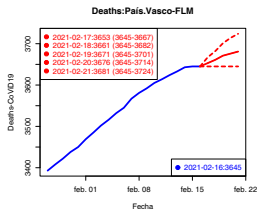


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: País Vasco

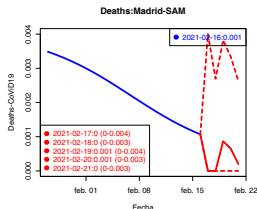
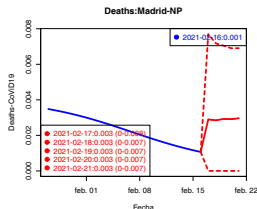
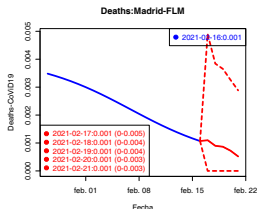
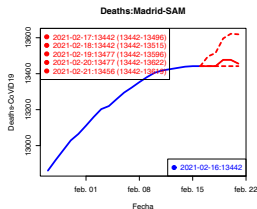
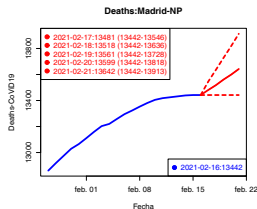
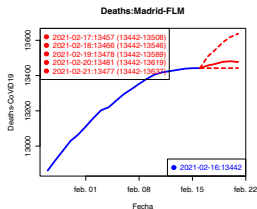


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

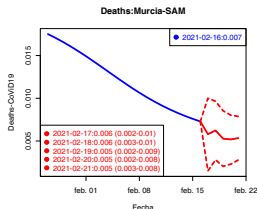
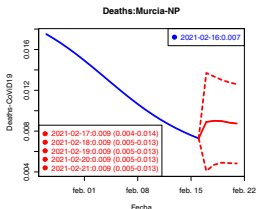
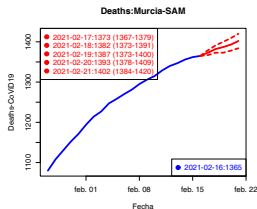
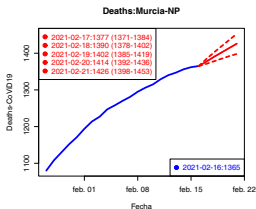
Fallecidos: Madrid



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

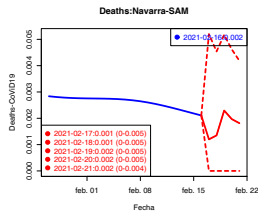
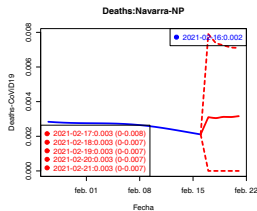
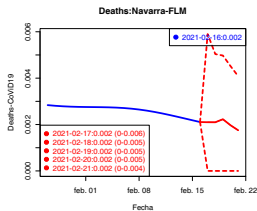
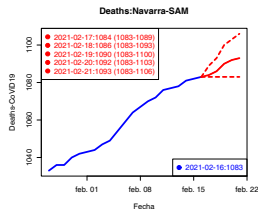
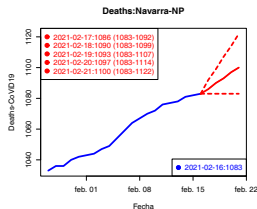
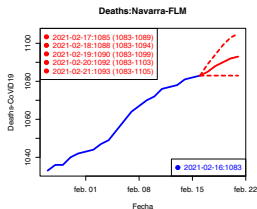
◀ Confirmados

◀ Fallecidos



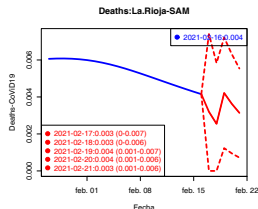
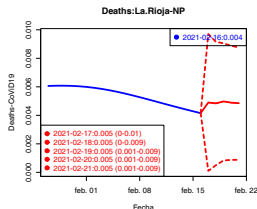
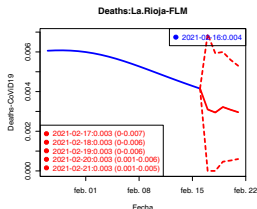
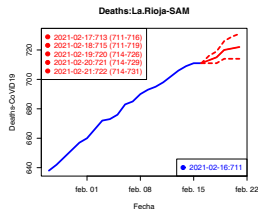
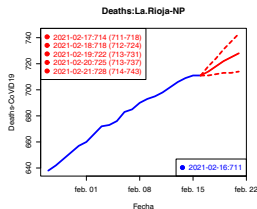
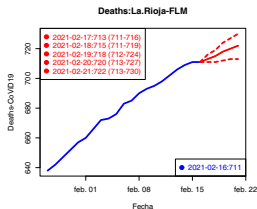
◀ Confirmados ▶ Fallecidos

Fallecidos: Navarra



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

Fallecidos: La Rioja



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

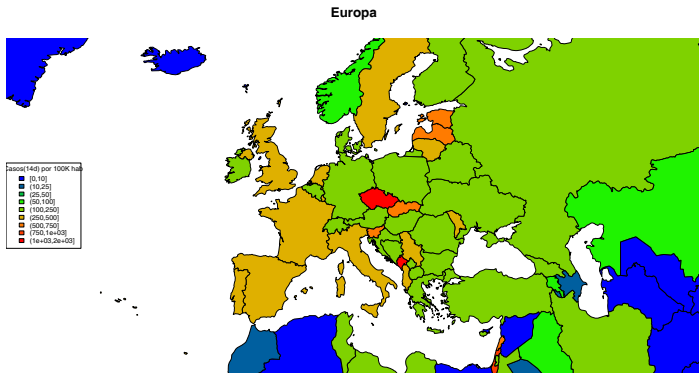
◀ Confirmados

◀ Fallecidos

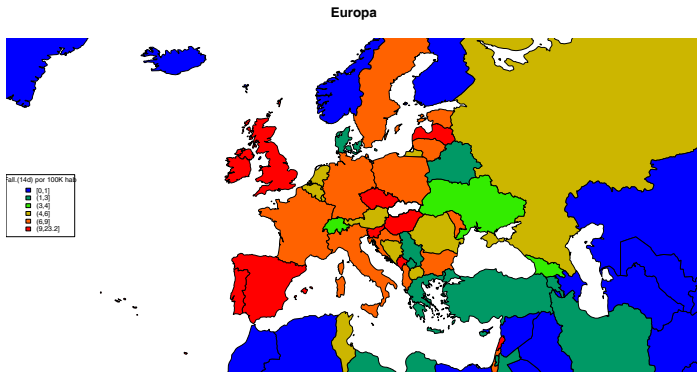
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Europa: Incidencia Acumulada (14d) por 100K hab.

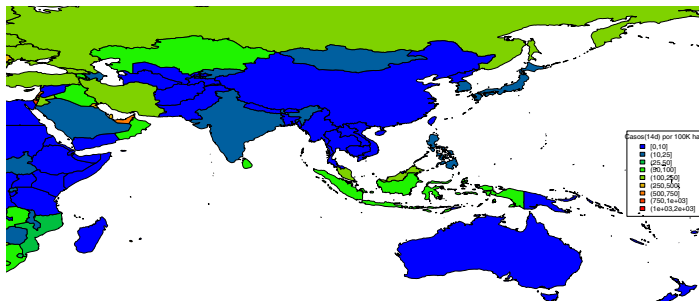


Europa: Fallecidos (14d) por 100K hab.



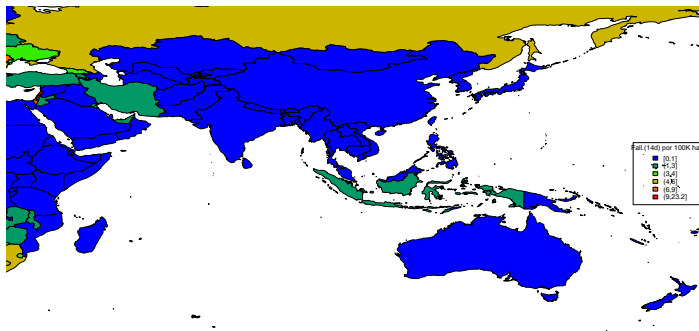
Asia y Oceanía: Incidencia acumulada (14d) por 100K hab.

Asia y Oceanía



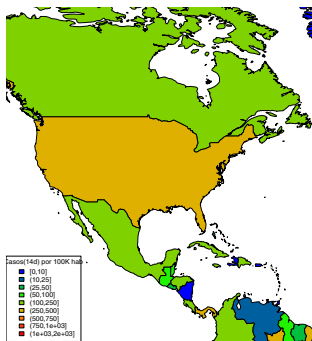
Asia y Oceanía: Fallecidos (14d) por 100K hab.

Asia y Oceanía

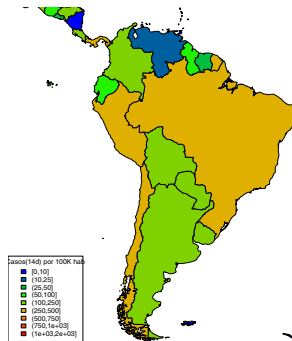


América: Incidencia acumulada (14d) por 100K hab.

América del Norte

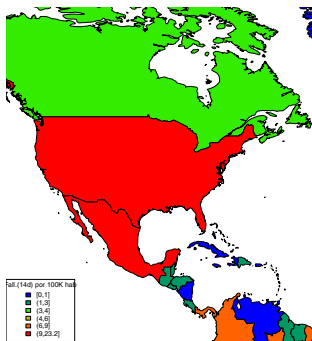


América del sur

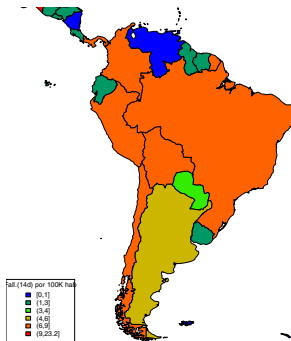


América: Fallecidos (14d) por 100K hab.

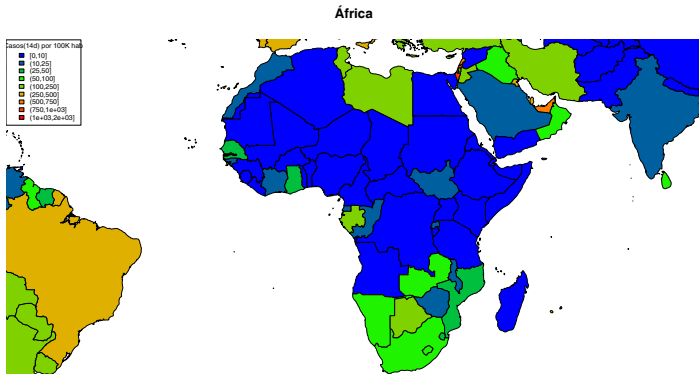
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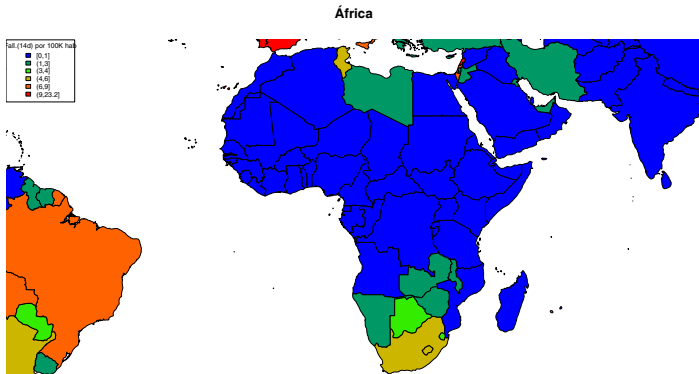
América del sur



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.