

Predicciones sobre CoViD-19

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29 de abril de 2021



DEPARTAMENTO DE ESTATÍSTICA,
ANÁLISE MATEMÁTICA E OPTIMIZACIÓN



- Predicciones

- Predicciones Fallecidos

3 Panorama internacional

Datos

Aplicación Shiny:

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

Último dato fichero CCAA: 27/04/2021

Fuente: [https:](https://)

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//cnecovid.isciii.es/covid19/resources/casos_tecnica_ccaa.csv
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Predicciones: [▶ España](#) [▶ Andalucía](#) [▶ Aragón](#) [▶ Asturias](#) [▶ I. Baleares](#) [▶ 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	0.016	0.003	0.013	0.004	0.002	0.005	0.481	0.896	0.574
H4	0.05	0.027	0.045	0.04	0.022	0.039	0.817	0.91	0.835
H8	0.206	0.125	0.193	0.181	0.096	0.17	0.825	0.903	0.836
H12	0.606	0.384	0.569	0.652	0.342	0.599	0.797	0.882	0.809
H15	1.321	0.868	1.25	1.371	0.719	1.255	0.755	0.852	0.768

Tabla Previsión Confirmados: Mod. No Paramétrico.

Last=27/04/2021

	Last	IA14	IA7	H1	H4	H8	H12	H15
España	3504799	193	76	3513021	3535339	3570532	3606480	3640006
Andalucía	548277	191	80	549794	553837	560212	566551	572496
Aragón	117590	235	105	117863	118609	119785	121000	122136
Asturias	50520	117	37	50635	50946	51436	51933	52394
Canarias	52241	92	33	52423	52917	53657	54378	55049
Cantabria	28532	223	93	28642	28937	29381	29829	30257
Castilla.y.León	222397	169	72	222773	223837	225492	227257	228902
Castilla.La.Mancha	184298	172	60	184629	185556	187001	188521	189929
Cataluña	580730	257	104	582481	587119	594416	601785	608794
Ceuta	5746	179	63	5763	5808	5880	5947	6008
Comunidad.Valenciana	390071	36	14	390437	391513	393249	395227	397157
Extremadura	73709	97	42	73819	74132	74618	75143	75632
Galicia	121524	86	35	121732	122322	123241	124220	125133
Islas.Baleares	59146	47	18	59216	59418	59734	60086	60422
La.Rioja	29489	227	90	29552	29726	30000	30285	30552
Madrid	678391	328	133	680382	685662	693968	702285	710149
Melilla	8679	319	134	8706	8778	8890	8999	9102
Murcia	110679	61	27	110801	111157	111718	112348	112954
Navarra	59544	301	121	59731	60229	61005	61768	62487
País.Vasco	183236	371	100	183951	185947	188689	191424	193889

Cuadro: Previsión Confirmados: Mod. No Paramétrico - Horiz. (días).

Tabla Ratio Incr. Confirmados: Mod. Lineal.

Last=27/04/2021

	Last	H1	H4	H8	H12	H15
España	0.0015	0.0021	0.0058	0.0110	0.0145	0.0183
Andalucía	0.0017	0.0023	0.0068	0.0126	0.0170	0.0210
Aragón	0.0017	0.0025	0.0073	0.0142	0.0198	0.0251
Asturias	0.0011	0.0014	0.0032	0.0057	0.0060	0.0069
Canarias	0.0021	0.0026	0.0070	0.0126	0.0163	0.0198
Cantabria	0.0028	0.0038	0.0111	0.0215	0.0308	0.0392
Castilla.y.León	0.0011	0.0018	0.0048	0.0093	0.0121	0.0154
Castilla.La.Mancha	0.0010	0.0017	0.0037	0.0066	0.0076	0.0090
Cataluña	0.0020	0.0027	0.0078	0.0151	0.0208	0.0261
Ceuta	0.0014	0.0011	0.0036	0.0068	0.0076	0.0091
Comunidad.Valenciana	0.0003	0.0009	0.0017	0.0035	0.0035	0.0049
Extremadura	0.0008	0.0014	0.0035	0.0071	0.0088	0.0113
Galicia	0.0011	0.0018	0.0048	0.0093	0.0121	0.0153
Islas.Baleares	0.0005	0.0012	0.0025	0.0051	0.0057	0.0075
La.Rioja	0.0014	0.0021	0.0055	0.0102	0.0133	0.0164
Madrid	0.0020	0.0026	0.0077	0.0152	0.0211	0.0273
Melilla	0.0019	0.0020	0.0062	0.0121	0.0160	0.0200
Murcia	0.0005	0.0012	0.0026	0.0054	0.0063	0.0083
Navarra	0.0020	0.0023	0.0071	0.0137	0.0187	0.0234
País.Vasco	0.0019	0.0021	0.0038	0.0046	0.0028	0.0007

Cuadro: Previsión Ratio Incr. Confirmados: Mod. lineal - Horiz. (días).

Tabla Ratio Incr. Confirmados: Mod. No Paramétrico.

Last=27/04/2021

	Last	H1	H4	H8	H12	H15
España	0.0015	0.0023	0.0087	0.0188	0.0290	0.0386
Andalucía	0.0017	0.0028	0.0101	0.0218	0.0333	0.0442
Aragón	0.0017	0.0023	0.0087	0.0187	0.0290	0.0387
Asturias	0.0011	0.0023	0.0084	0.0181	0.0280	0.0371
Canarias	0.0021	0.0035	0.0129	0.0271	0.0409	0.0537
Cantabria	0.0028	0.0038	0.0142	0.0298	0.0455	0.0604
Castilla.y.León	0.0011	0.0017	0.0065	0.0139	0.0219	0.0292
Castilla.La.Mancha	0.0010	0.0018	0.0068	0.0147	0.0229	0.0306
Cataluña	0.0020	0.0030	0.0110	0.0236	0.0363	0.0483
Ceuta	0.0014	0.0029	0.0108	0.0233	0.0349	0.0456
Comunidad.Valenciana	0.0003	0.0009	0.0037	0.0081	0.0132	0.0182
Extremadura	0.0008	0.0015	0.0057	0.0123	0.0194	0.0261
Galicia	0.0011	0.0017	0.0066	0.0141	0.0222	0.0297
Islas.Baleares	0.0005	0.0012	0.0046	0.0099	0.0159	0.0216
La.Rioja	0.0014	0.0021	0.0080	0.0173	0.0270	0.0360
Madrid	0.0020	0.0029	0.0107	0.0230	0.0352	0.0468
Melilla	0.0019	0.0031	0.0114	0.0243	0.0369	0.0487
Murcia	0.0005	0.0011	0.0043	0.0094	0.0151	0.0206
Navarra	0.0020	0.0031	0.0115	0.0245	0.0374	0.0494
País.Vasco	0.0019	0.0039	0.0148	0.0298	0.0447	0.0581

Cuadro: Previsión Ratio Incr. Confirmados: Mod. No Paramétrico - Horiz.
(días).

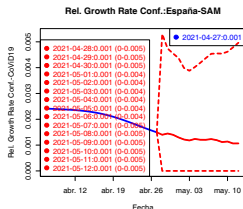
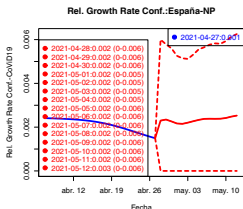
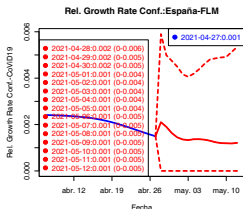
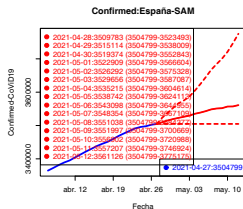
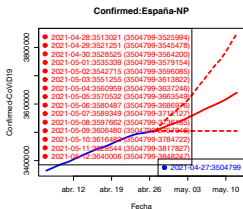
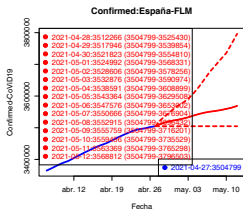
Tabla Ratio Incr. Confirmados: Mod. Aditivo.

Last=27/04/2021

	Last	H1	H4	H8	H12	H15
España	0.0015	0.0014	0.0052	0.0097	0.0135	0.0161
Andalucía	0.0017	0.0017	0.0059	0.0108	0.0145	0.0159
Aragón	0.0017	0.0019	0.0069	0.0130	0.0189	0.0229
Asturias	0.0011	0.0006	0.0024	0.0037	0.0036	0.0019
Canarias	0.0021	0.0019	0.0063	0.0105	0.0135	0.0145
Cantabria	0.0028	0.0033	0.0111	0.0202	0.0298	0.0373
Castilla.y.León	0.0011	0.0012	0.0044	0.0087	0.0130	0.0164
Castilla.La.Mancha	0.0010	0.0009	0.0032	0.0055	0.0076	0.0089
Cataluña	0.0020	0.0023	0.0077	0.0137	0.0191	0.0224
Ceuta	0.0014	0.0009	0.0034	0.0073	0.0087	0.0085
Comunidad.Valenciana	0.0003	0.0003	0.0016	0.0035	0.0067	0.0100
Extremadura	0.0008	0.0007	0.0030	0.0063	0.0095	0.0122
Galicia	0.0011	0.0012	0.0044	0.0086	0.0128	0.0161
Islas.Baleares	0.0005	0.0005	0.0022	0.0048	0.0080	0.0110
La.Rioja	0.0014	0.0015	0.0052	0.0089	0.0125	0.0142
Madrid	0.0020	0.0019	0.0070	0.0138	0.0197	0.0252
Melilla	0.0019	0.0015	0.0055	0.0108	0.0136	0.0141
Murcia	0.0005	0.0006	0.0025	0.0053	0.0090	0.0124
Navarra	0.0020	0.0018	0.0063	0.0119	0.0156	0.0171
País.Vasco	0.0019	0.0024	0.0050	0.0064	0.0076	0.0064

Cuadro: Previsión Ratio Incr. Confirmados: Mod. Aditivo - Horiz. (días).

Confirmados: España



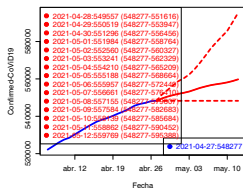
Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

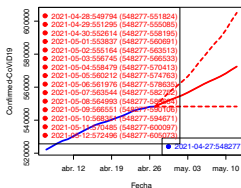
◀ Fallecidos

Confirmados: Andalucía

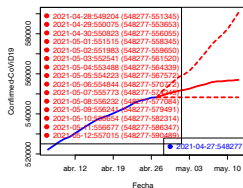
Confirmed:Andalucía-FLM



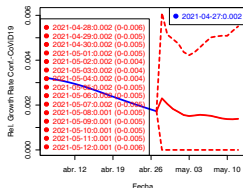
Confirmed:Andalucía-NP



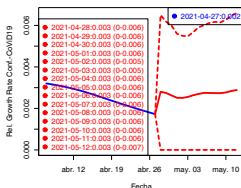
Confirmed:Andalucía-SAM



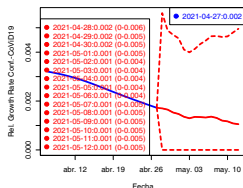
Rel. Growth Rate Conf.:Andalucia-FLM



Rel. Growth Rate Conf.:Andalucia-NP



Rel. Growth Rate Conf.:Andalucia-SAM

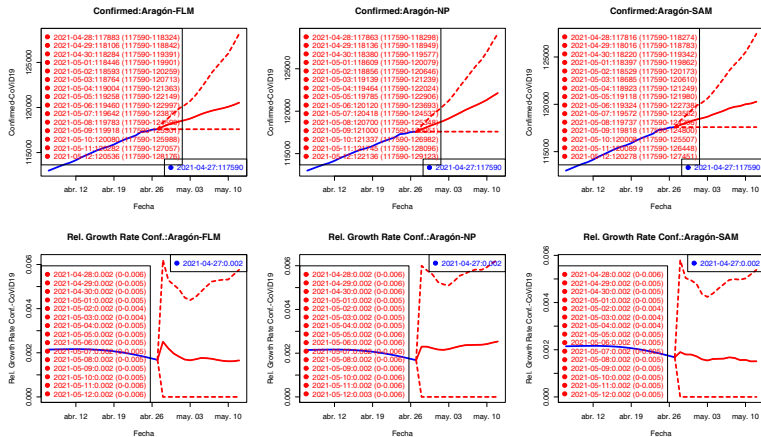


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

← Confirmados

← Fallecidos

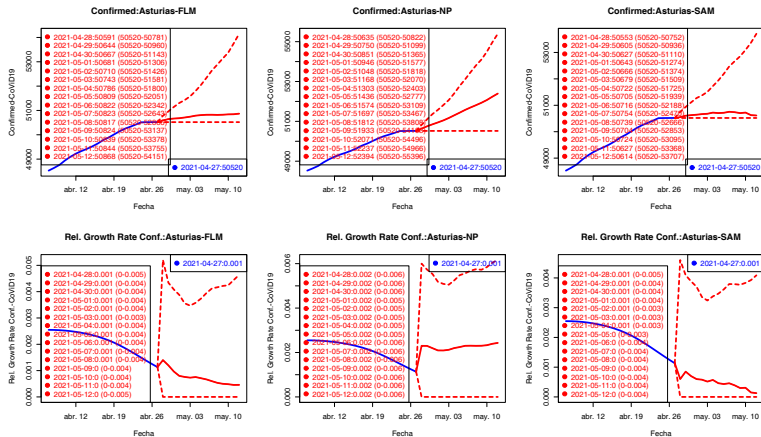
Confirmados: Aragón



Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados ▶ Fallecidos

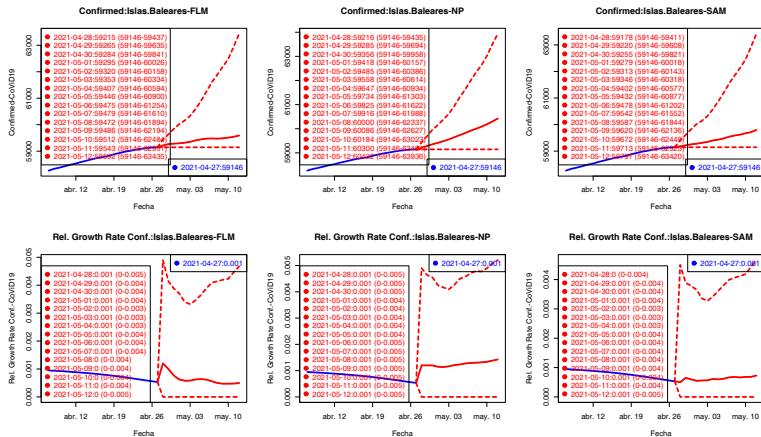
Confirmados: Asturias



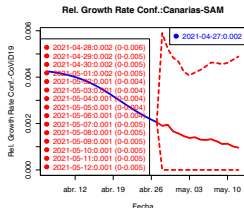
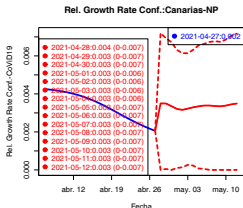
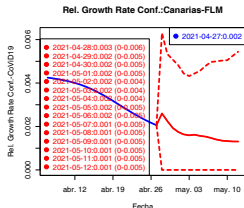
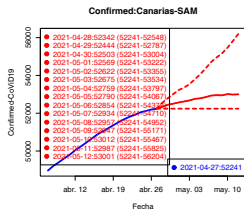
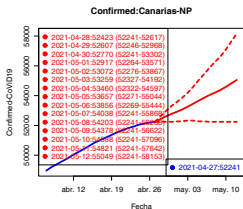
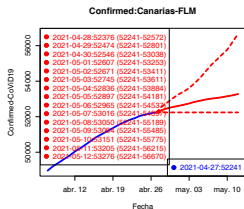
Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados ▶ Fallecidos

Confirmados: Islas Baleares



Confirmados: Canarias



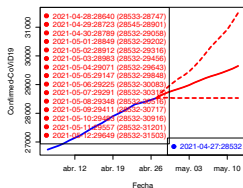
Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

← Confirmados

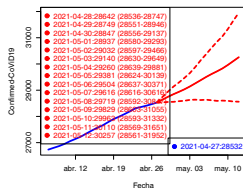
← Fallecidos

Confirmados: Cantabria

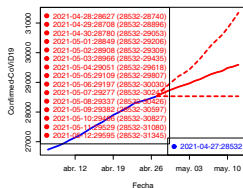
Confirmed:Cantabria-FLM



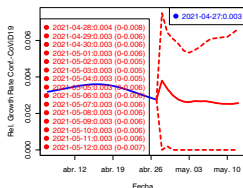
Confirmed:Cantabria-NP



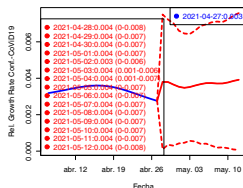
Confirmed:Cantabria-SAM



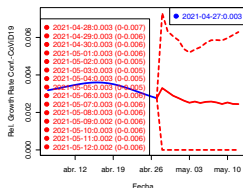
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Rel. Growth Rate Conf.:Cantabria-NP



Rel. Growth Rate Conf.:Cantabria-SAM

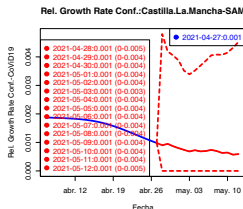
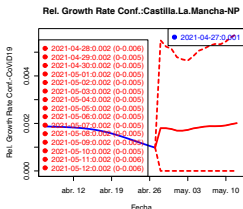
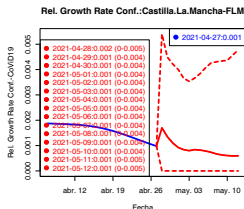
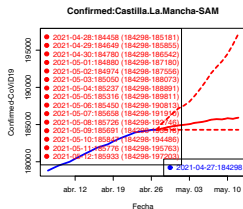
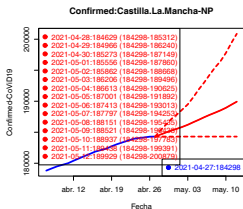
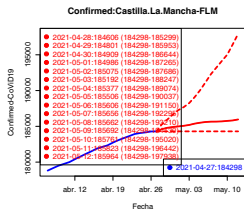


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Castilla-La Mancha

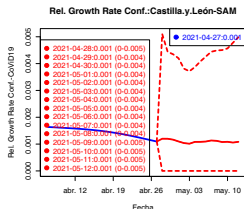
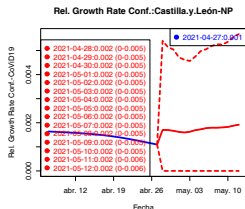
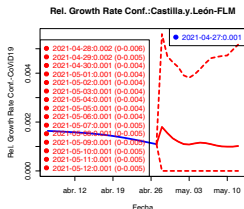
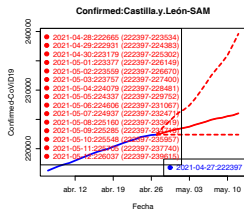
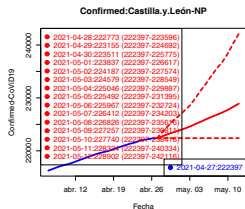
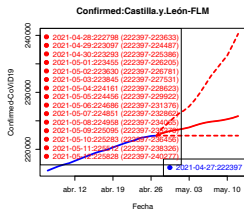


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Castilla y León

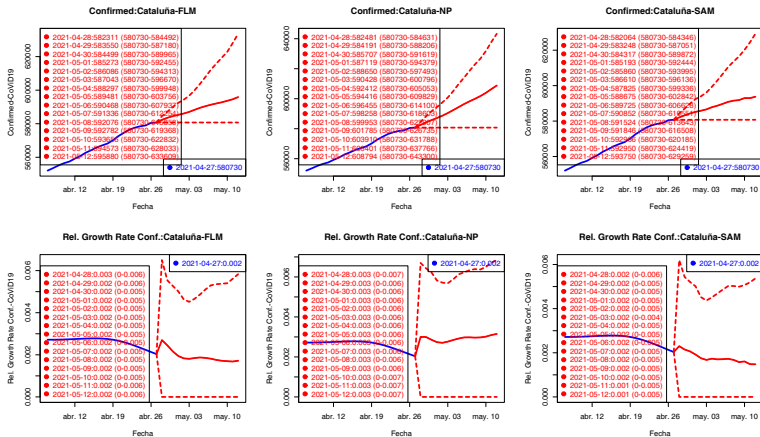


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

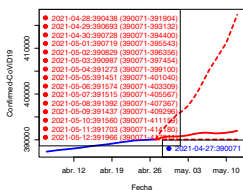
◀ Fallecidos

Confirmados: Cataluña

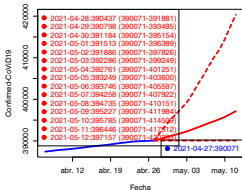


Confirmados: C. Valenciana

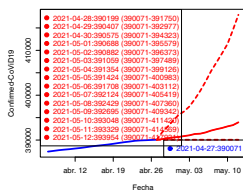
Confirmed:Comunidad.Valenciana-FLM



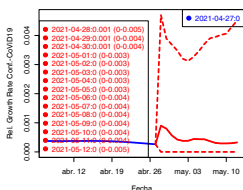
Confirmed:Comunidad.Valenciana-NP



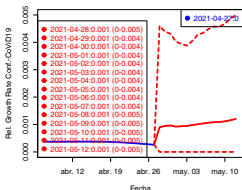
Confirmed:Comunidad.Valenciana-SAM



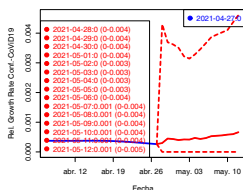
Rel. Growth Rate Conf.:Comunidad.Valenciana-FLM



Rel. Growth Rate Conf.:Comunidad.Valenciana-NP



Rel. Growth Rate Conf.:Comunidad.Valenciana-SAM

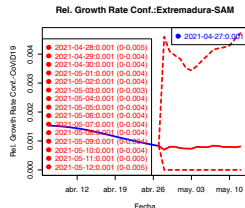
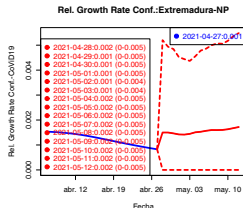
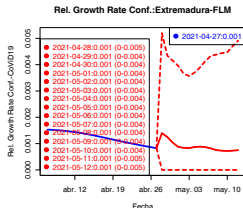
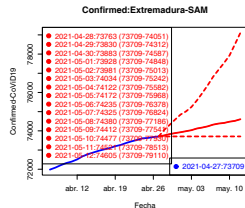
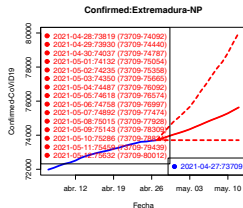
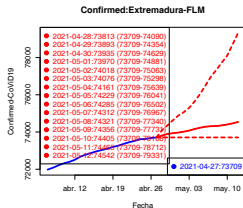


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Extremadura

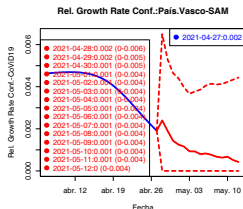
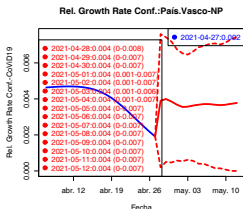
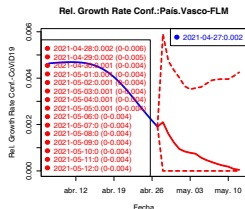
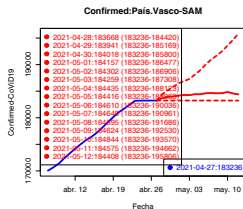
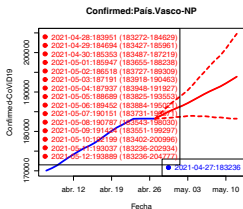
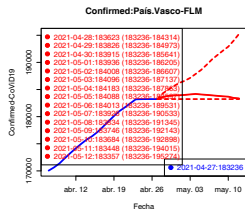


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: País Vasco

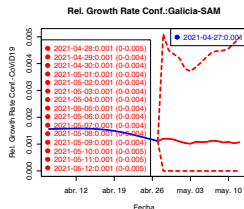
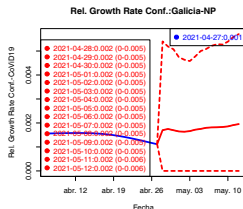
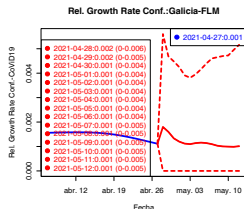
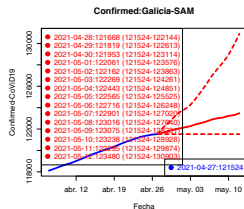
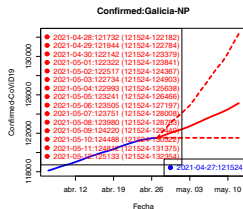
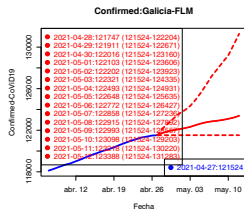


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Galicia

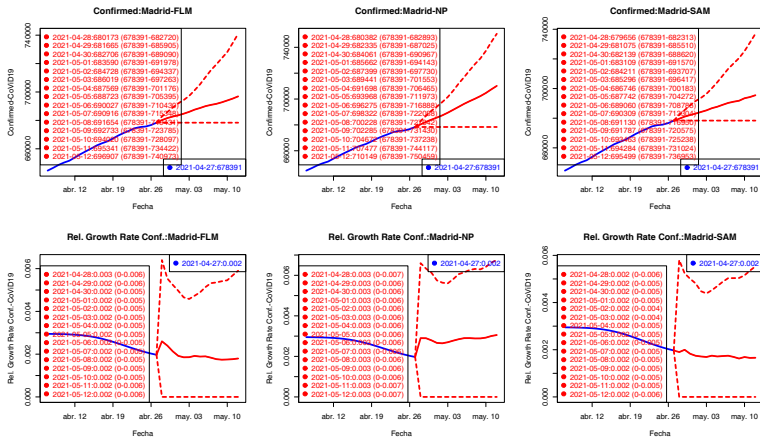


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

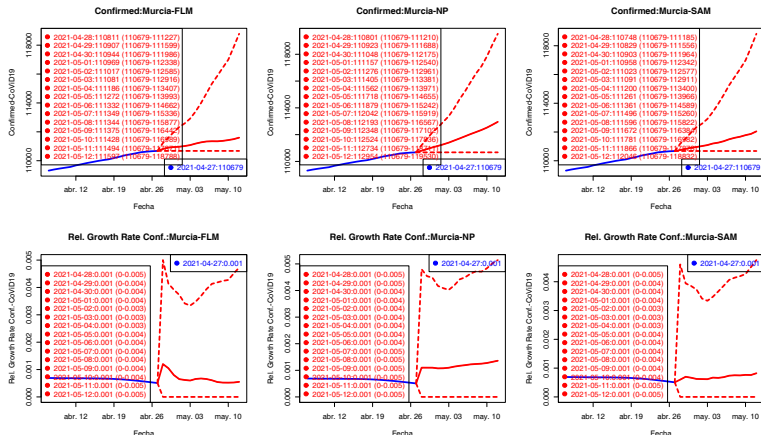
Confirmados: Madrid



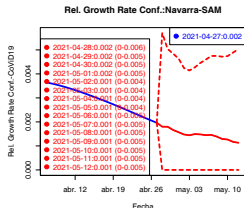
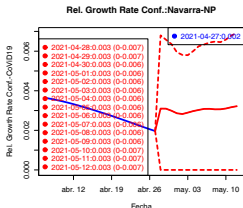
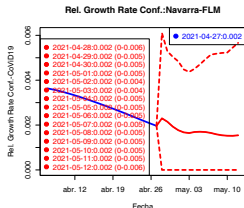
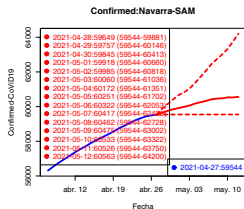
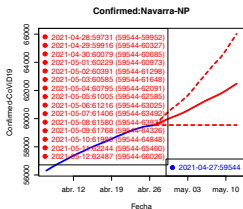
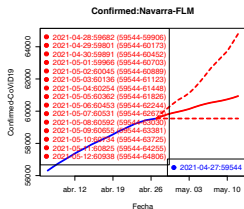
Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados ▶ Fallecidos

Confirmados: Murcia



Confirmados: Navarra

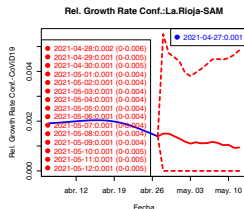
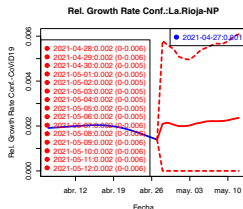
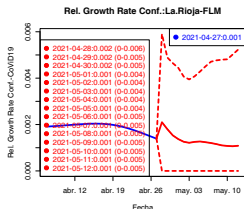
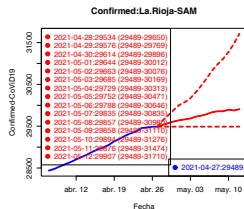
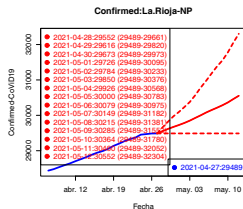
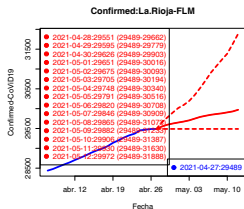


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: La Rioja



Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

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

Modelos para fallecidos por CoViD-19

Último dato: 27/04/2021 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	0.005	0.004	0.005	0.001	0.001	0.001	0.559	0.621	0.564
H4	0.019	0.018	0.018	0.009	0.009	0.008	0.818	0.831	0.829
H8	0.064	0.068	0.059	0.035	0.04	0.031	0.858	0.853	0.868
H12	0.137	0.148	0.121	0.092	0.099	0.077	0.864	0.857	0.879
H15	0.214	0.239	0.18	0.166	0.204	0.125	0.873	0.862	0.893

Tabla Previsión Fallecidos: Mod. Lineal.

Last=27/04/2021

	Last	H1	H4	H8	H12	H15
España	77548	77591	77631	77693	77611	77548
Andalucía	9530	9538	9548	9563	9558	9544
Aragón	3414	3417	3422	3432	3434	3435
Asturias	1943	1944	1945	1946	1943	1943
Canarias	716	717	719	721	721	720
Cantabria	556	556	557	559	559	559
Castilla.y.León	6695	6699	6702	6709	6704	6695
Castilla.La.Mancha	5818	5819	5818	5818	5818	5818
Cataluña	13841	13845	13847	13849	13841	13841
Ceuta	104	104	105	106	107	108
Comunidad.Valenciana	7253	7255	7253	7253	7253	7253
Extremadura	1770	1771	1772	1774	1772	1770
Galicia	2369	2370	2372	2373	2372	2369
Islas.Baleares	819	819	819	820	819	819
La.Rioja	757	757	757	757	757	757
Madrid	15003	15015	15034	15063	15066	15054
Melilla	89	89	89	90	90	90
Murcia	1586	1586	1586	1586	1586	1586
Navarra	1154	1156	1160	1168	1172	1176
País.Vasco	4131	4131	4131	4131	4131	4131

Cuadro: Previsión fallecidos: Mod. lineal - Horiz. (días).

Tabla Previsión Fallecidos: Mod. No Paramétrico.

Last=27/04/2021

	Last	H1	H4	H8	H12	H15
España	77548	77636	77936	78390	78828	79244
Andalucía	9530	9544	9586	9654	9719	9782
Aragón	3414	3418	3432	3454	3475	3495
Asturias	1943	1945	1953	1964	1975	1985
Canarias	716	718	722	730	737	744
Cantabria	556	557	559	563	566	569
Castilla.y.León	6695	6702	6726	6763	6798	6831
Castilla.La.Mancha	5818	5824	5846	5878	5909	5938
Cataluña	13841	13854	13903	13974	14042	14107
Ceuta	104	104	105	107	108	109
Comunidad.Valenciana	7253	7259	7283	7317	7349	7379
Extremadura	1770	1772	1779	1789	1799	1809
Galicia	2369	2371	2380	2393	2405	2417
Islas.Baleares	819	820	822	826	830	834
La.Rioja	757	758	761	765	769	773
Madrid	15003	15022	15085	15181	15274	15364
Melilla	89	89	90	91	92	93
Murcia	1586	1587	1593	1601	1608	1615
Navarra	1154	1156	1161	1170	1178	1186
País.Vasco	4131	4136	4154	4181	4208	4233

Cuadro: Previsión fallecidos: Mod. No Paramétrico - Horiz. (días).

Tabla Previsión Fallecidos: Mod. Aditivo.

Last=27/04/2021

	Last	H1	H4	H8	H12	H15
España	77548	77568	77698	77826	77902	77898
Andalucía	9530	9536	9554	9589	9595	9600
Aragón	3414	3416	3425	3436	3446	3453
Asturias	1943	1943	1946	1946	1947	1943
Canarias	716	717	719	724	726	728
Cantabria	556	556	558	559	560	561
Castilla.y.León	6695	6697	6708	6720	6730	6734
Castilla.La.Mancha	5818	5818	5826	5836	5839	5842
Cataluña	13841	13841	13864	13856	13863	13842
Ceuta	104	104	105	106	106	106
Comunidad.Valenciana	7253	7253	7260	7262	7273	7275
Extremadura	1770	1771	1774	1780	1782	1786
Galicia	2369	2369	2373	2373	2378	2376
Islas.Baleares	819	819	820	821	822	823
La.Rioja	757	757	758	759	760	759
Madrid	15003	15011	15038	15081	15096	15099
Melilla	89	89	89	90	90	91
Murcia	1586	1586	1588	1590	1592	1594
Navarra	1154	1155	1159	1162	1168	1168
País.Vasco	4131	4131	4135	4131	4131	4131

Cuadro: Previsión fallecidos: Mod. Aditivo - Horiz. (días).

Tabla Ratio Incr. Fallecidos: Mod. Lineal.

Last=27/04/2021

	Last	H1	H4	H8	H12	H15
España	0.0005	0.0005	0.0011	0.0019	0.0008	0.0000
Andalucía	0.0009	0.0008	0.0019	0.0034	0.0029	0.0015
Aragón	0.0008	0.0009	0.0024	0.0051	0.0060	0.0062
Asturias	0.0006	0.0006	0.0012	0.0014	0.0001	0.0000
Canarias	0.0016	0.0012	0.0035	0.0069	0.0068	0.0061
Cantabria	0.0007	0.0007	0.0021	0.0047	0.0048	0.0053
Castilla.y.León	0.0005	0.0006	0.0010	0.0020	0.0014	0.0000
Castilla.La.Mancha	0.0003	0.0002	0.0000	0.0000	0.0000	0.0000
Cataluña	0.0002	0.0003	0.0004	0.0005	0.0000	0.0000
Ceuta	0.0033	0.0036	0.0109	0.0217	0.0313	0.0355
Comunidad.Valenciana	0.0002	0.0003	0.0000	0.0000	0.0000	0.0000
Extremadura	0.0006	0.0006	0.0010	0.0024	0.0013	0.0002
Galicia	0.0005	0.0006	0.0012	0.0018	0.0013	0.0000
Islas.Baleares	0.0003	0.0004	0.0003	0.0010	0.0000	0.0000
La.Rioja	0.0003	0.0003	0.0002	0.0000	0.0000	0.0000
Madrid	0.0008	0.0008	0.0021	0.0040	0.0042	0.0034
Melilla	0.0020	0.0015	0.0052	0.0073	0.0083	0.0076
Murcia	0.0002	0.0002	0.0000	0.0000	0.0000	0.0000
Navarra	0.0015	0.0017	0.0055	0.0119	0.0159	0.0194
País.Vasco	0.0004	0.0000	0.0000	0.0000	0.0000	0.0000

Cuadro: Previsión Ratio Incr. Fallecidos: Mod. lineal - Horiz. (días).

Tabla Ratio Incr. Fallecidos: Mod. No Paramétrico.

Last=27/04/2021

	Last	H1	H4	H8	H12	H15
España	0.0005	0.0011	0.0050	0.0109	0.0165	0.0219
Andalucía	0.0009	0.0014	0.0059	0.0130	0.0198	0.0264
Aragón	0.0008	0.0013	0.0054	0.0117	0.0179	0.0238
Asturias	0.0006	0.0011	0.0050	0.0108	0.0164	0.0217
Canarias	0.0016	0.0025	0.0089	0.0197	0.0297	0.0396
Cantabria	0.0007	0.0013	0.0054	0.0118	0.0180	0.0240
Castilla.y.León	0.0005	0.0010	0.0047	0.0102	0.0154	0.0204
Castilla.La.Mancha	0.0003	0.0011	0.0048	0.0103	0.0156	0.0206
Cataluña	0.0002	0.0010	0.0045	0.0096	0.0146	0.0192
Ceuta	0.0033	0.0032	0.0112	0.0251	0.0379	0.0504
Comunidad.Valenciana	0.0002	0.0009	0.0041	0.0088	0.0132	0.0174
Extremadura	0.0006	0.0011	0.0050	0.0109	0.0166	0.0219
Galicia	0.0005	0.0010	0.0046	0.0101	0.0152	0.0201
Islas.Baleares	0.0003	0.0009	0.0042	0.0091	0.0136	0.0180
La.Rioja	0.0003	0.0010	0.0047	0.0102	0.0155	0.0205
Madrid	0.0008	0.0013	0.0054	0.0119	0.0181	0.0241
Melilla	0.0020	0.0033	0.0114	0.0247	0.0366	0.0476
Murcia	0.0002	0.0009	0.0043	0.0093	0.0140	0.0185
Navarra	0.0015	0.0015	0.0061	0.0135	0.0207	0.0277
País.Vasco	0.0004	0.0013	0.0056	0.0122	0.0186	0.0247

Cuadro: Previsión Ratio Incr. Fallecidos: Mod. No Paramétrico - Horiz. (días).

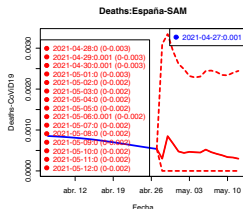
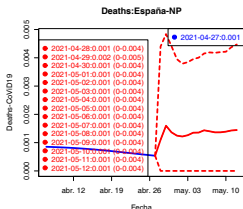
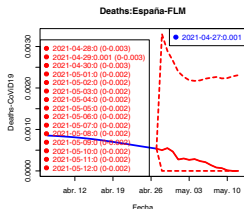
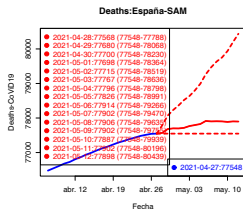
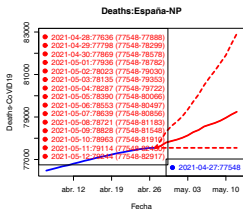
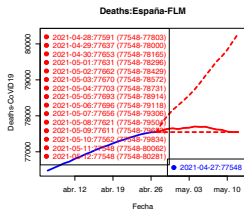
Tabla Ratio Incr. Fallecidos: Mod. Aditivo.

Last=27/04/2021

	Last	H1	H4	H8	H12	H15
España	0.0005	0.0003	0.0019	0.0036	0.0046	0.0045
Andalucía	0.0009	0.0006	0.0025	0.0062	0.0068	0.0073
Aragón	0.0008	0.0007	0.0033	0.0065	0.0094	0.0114
Asturias	0.0006	0.0001	0.0016	0.0014	0.0022	0.0000
Canarias	0.0016	0.0012	0.0046	0.0118	0.0141	0.0167
Cantabria	0.0007	0.0005	0.0031	0.0060	0.0078	0.0094
Castilla.y.León	0.0005	0.0002	0.0019	0.0038	0.0053	0.0058
Castilla.La.Mancha	0.0003	0.0000	0.0013	0.0032	0.0035	0.0040
Cataluña	0.0002	0.0000	0.0016	0.0011	0.0016	0.0001
Ceuta	0.0033	0.0026	0.0063	0.0146	0.0217	0.0192
Comunidad.Valenciana	0.0002	0.0000	0.0009	0.0013	0.0028	0.0031
Extremadura	0.0006	0.0003	0.0020	0.0054	0.0070	0.0090
Galicia	0.0005	0.0002	0.0017	0.0017	0.0036	0.0030
Islas.Baleares	0.0003	0.0000	0.0012	0.0026	0.0040	0.0045
La.Rioja	0.0003	0.0000	0.0019	0.0024	0.0034	0.0031
Madrid	0.0008	0.0005	0.0024	0.0052	0.0062	0.0064
Melilla	0.0020	0.0010	0.0053	0.0085	0.0137	0.0174
Murcia	0.0002	0.0000	0.0012	0.0027	0.0037	0.0049
Navarra	0.0015	0.0012	0.0042	0.0072	0.0118	0.0120
País.Vasco	0.0004	0.0000	0.0010	0.0000	0.0000	0.0000

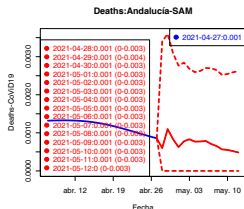
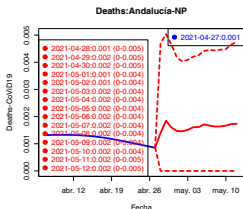
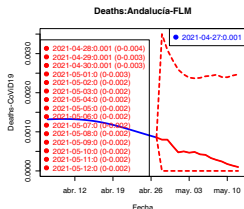
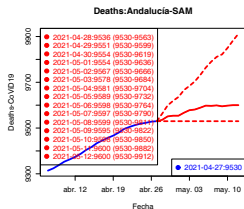
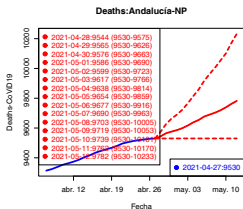
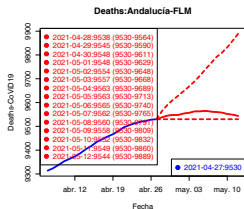
Cuadro: Previsión Ratio Incr. Fallecidos: Mod. Aditivo - Horizonte 1 – 5 días.

Fallecidos: España



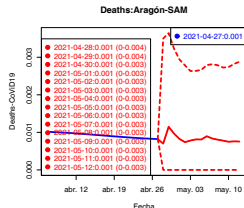
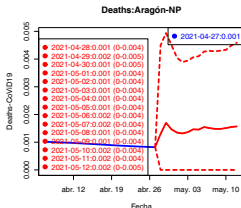
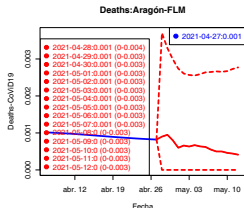
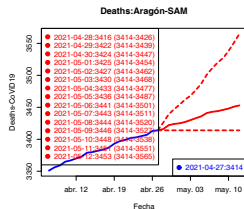
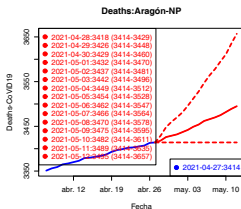
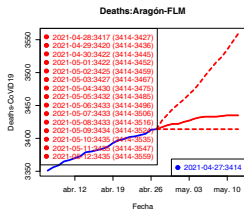
Los valores del Ratio de incremento de H2–H15 están rescalados a H1 para su comparación gráfica.

Fallecidos: Andalucía



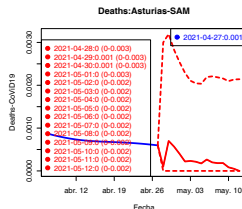
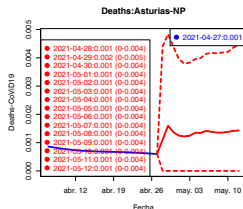
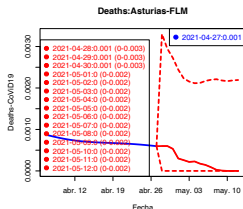
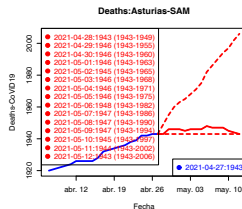
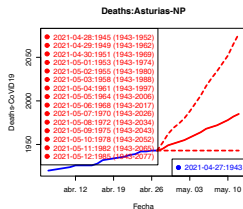
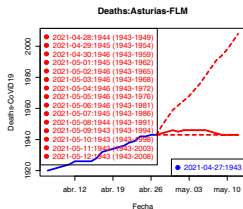
Los valores del Ratio de incremento de H2–H15 están rescalados a H1 para su comparación gráfica.

Fallecidos: Aragón



Los valores del Ratio de incremento de H2–H15 están rescalados a H1 para su comparación gráfica.

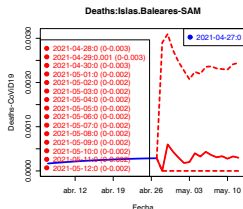
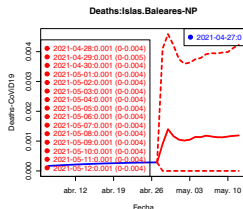
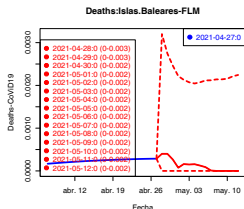
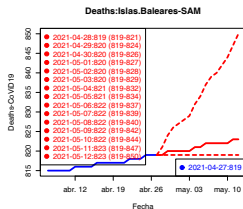
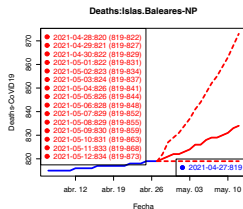
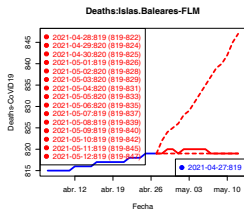
Fallecidos: Asturias

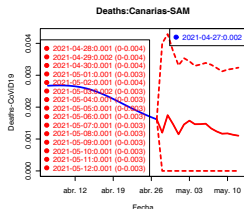
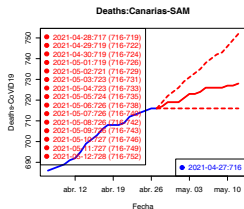


Los valores del Ratio de incremento de H2–H15 están rescalados a H1 para su comparación gráfica.

Los valores del Ratio de incremento de H2–H15 están rescalados a H1 para su comparación gráfica.

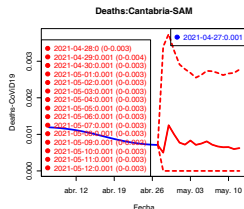
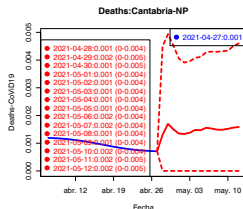
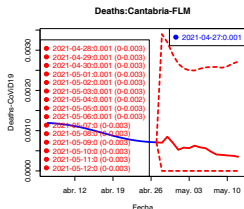
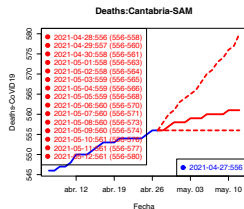
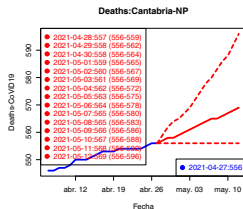
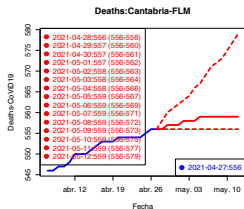
◀ Confirmados ▶ Fallecidos





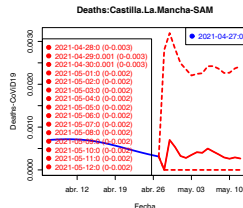
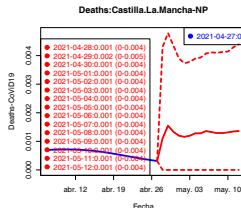
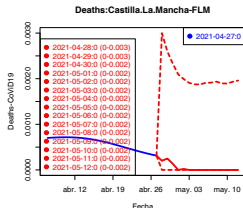
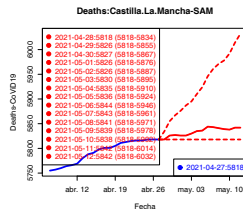
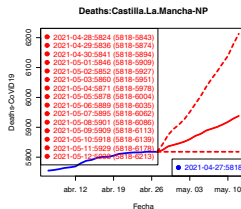
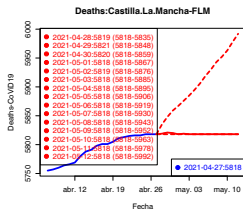
◀ Confirmados ▶ Fallecidos

Fallecidos: Cantabria



Los valores del Ratio de incremento de H2–H15 están rescalados a H1 para su comparación gráfica.

Fallecidos: Castilla-La Mancha

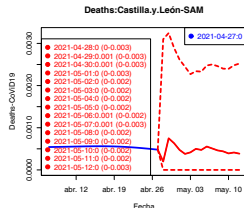
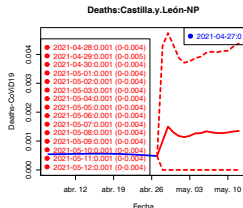
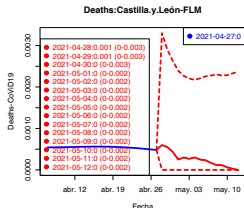
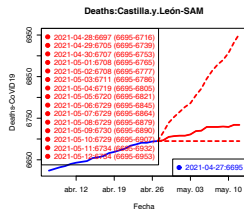
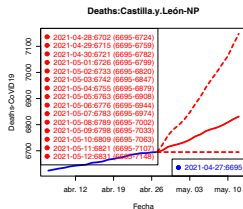
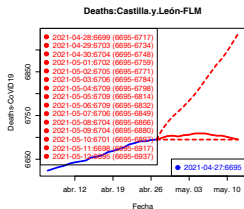


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Castilla y León

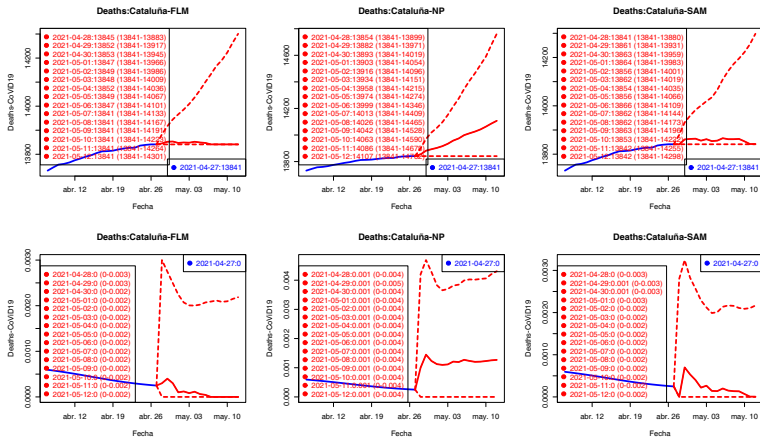


Los valores del Ratio de incremento de H2–H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Cataluña

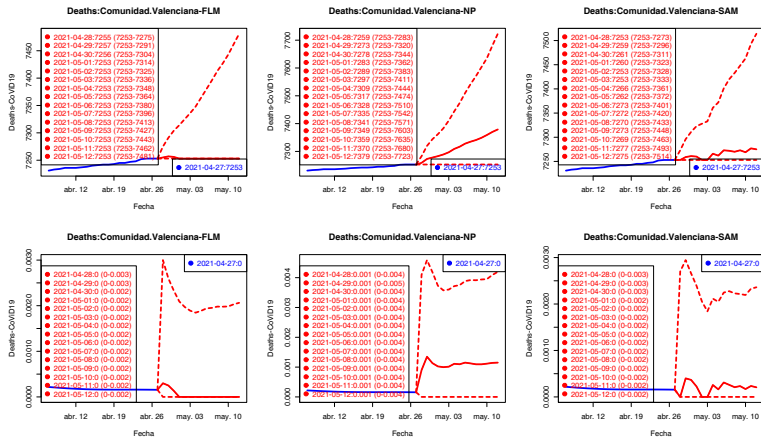


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: C. Valenciana

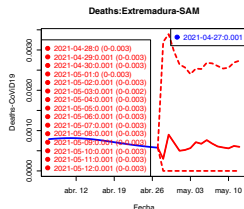
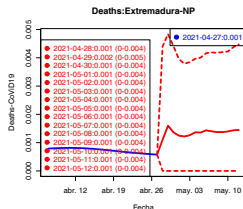
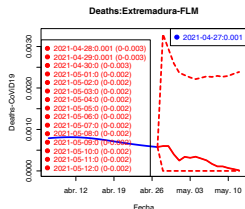
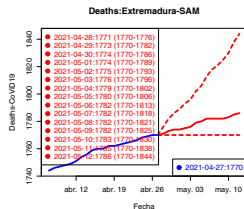
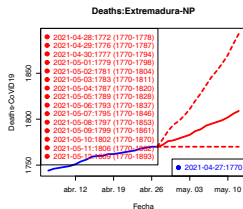
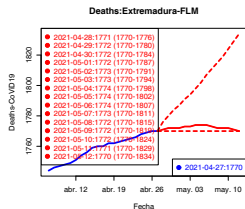


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Extremadura

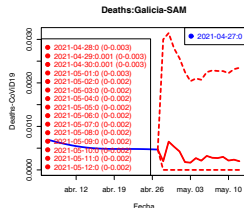
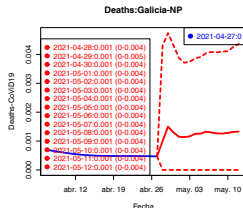
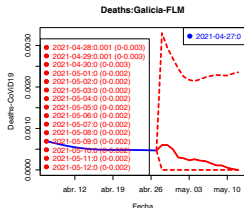
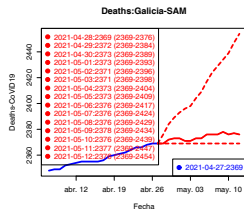
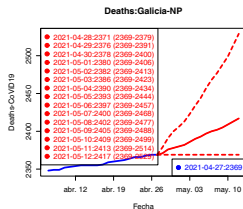
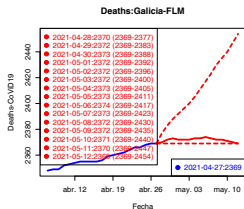


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Galicia

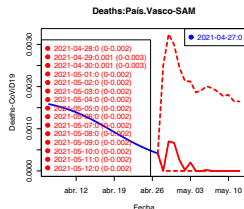
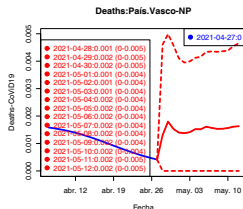
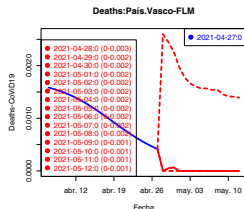
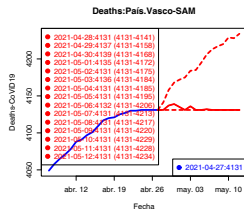
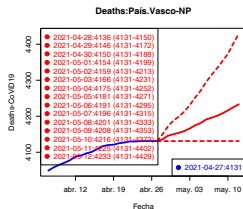
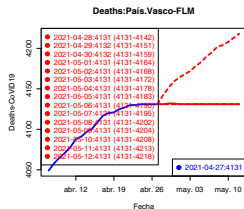


Los valores del Ratio de incremento de H2–H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: País Vasco

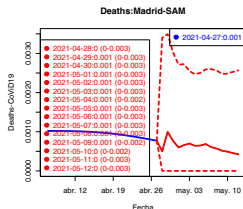
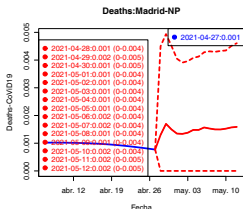
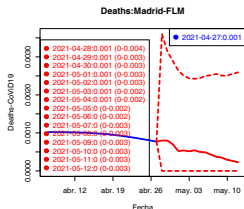
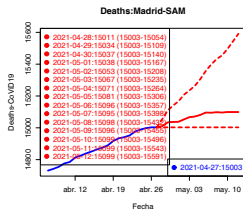
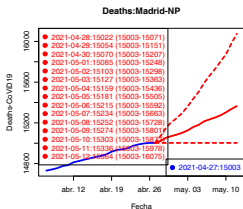
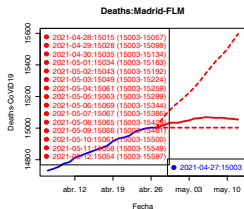


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

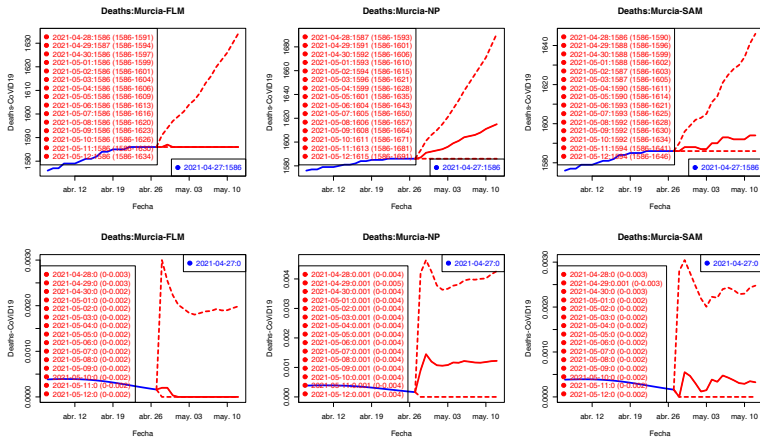
◀ Fallecidos

Fallecidos: Madrid



Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

Fallecidos: Murcia

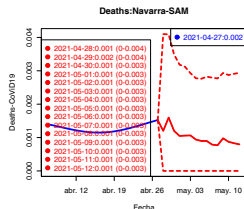
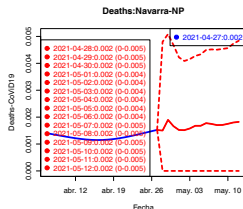
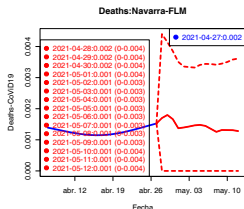
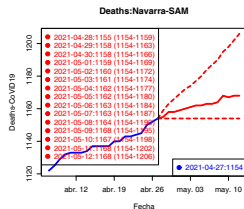
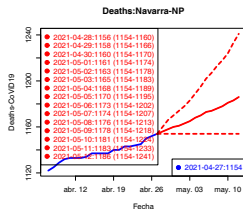
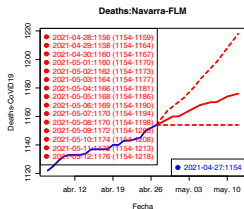


Los valores del Ratio de incremento de H2—H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

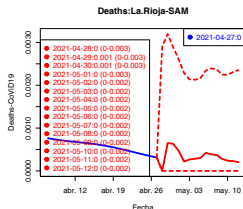
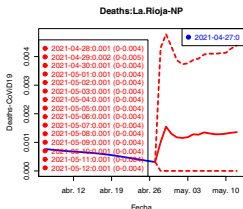
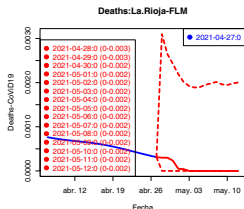
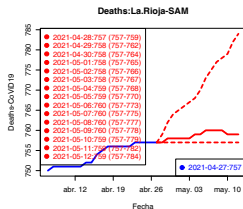
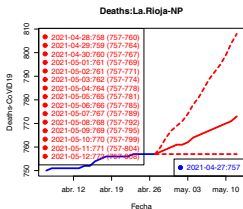
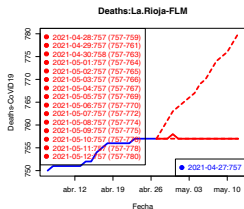
◀ Fallecidos

Fallecidos: Navarra



Los valores del Ratio de incremento de H2–H15 están rescalados a H1 para su comparación gráfica.

Fallecidos: La Rioja



Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

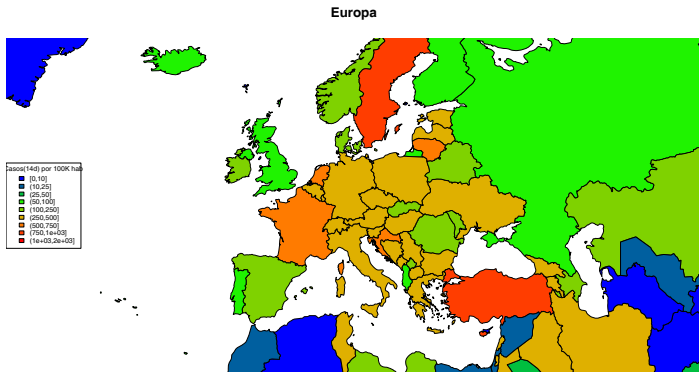
◀ Confirmados

◀ Fallecidos

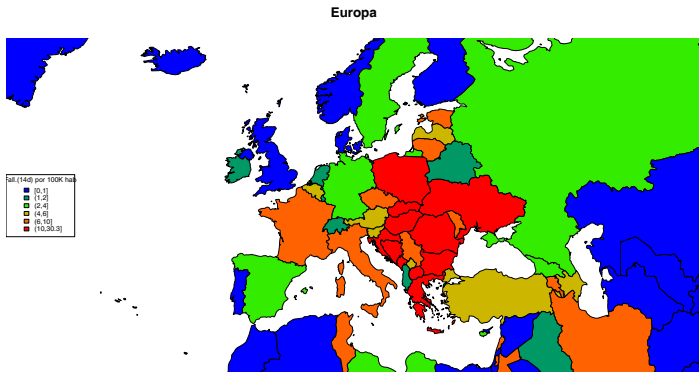
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Europa: Incidencia Acumulada (14d) por 100K hab.

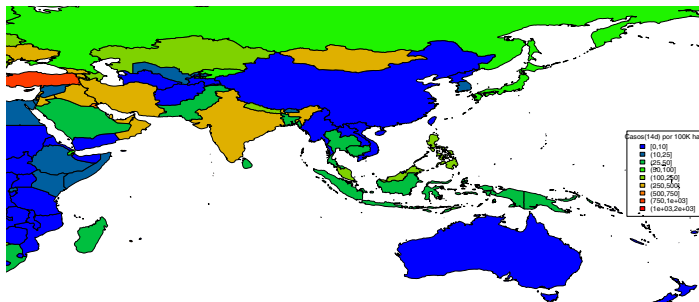


Europa: Fallecidos (14d) por 100K hab.



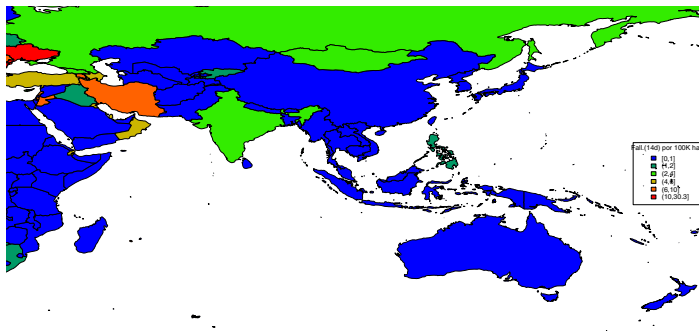
Asia y Oceanía: Incidencia acumulada (14d) por 100K hab.

Asia y Oceanía



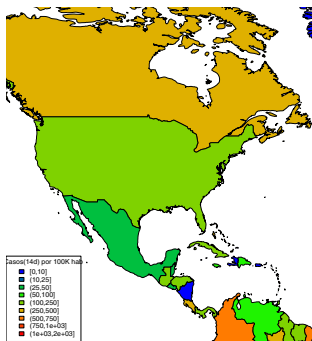
Asia y Oceanía: Fallecidos (14d) por 100K hab.

Asia y Oceanía

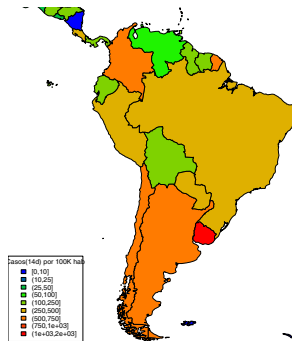


América: Incidencia acumulada (14d) por 100K hab.

América del Norte

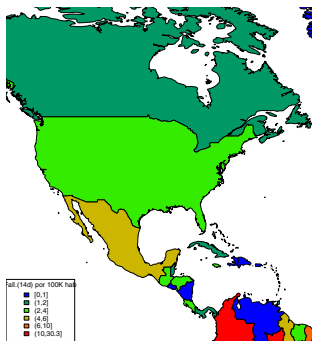


América del sur

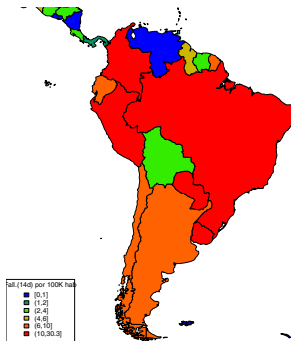


América: Fallecidos (14d) por 100K hab.

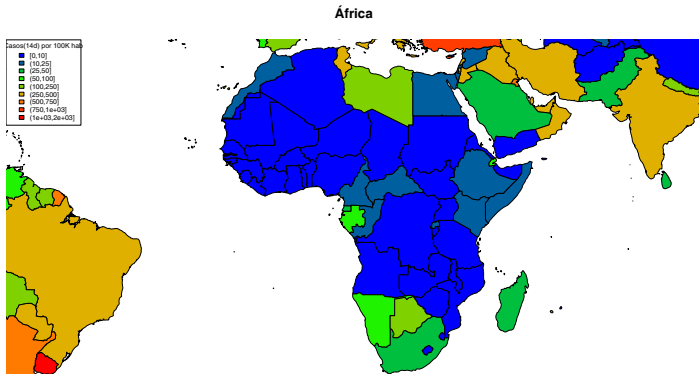
América del Norte



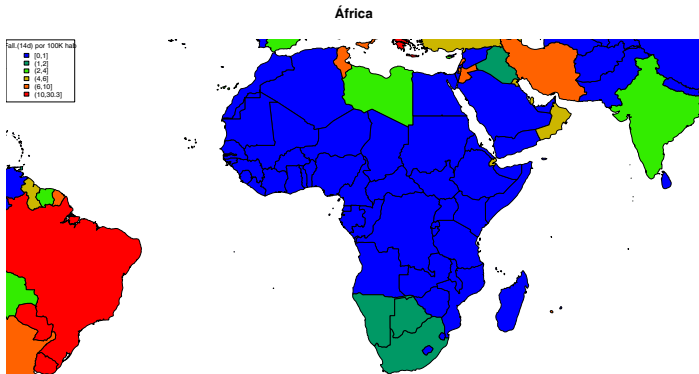
América del sur



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.