

Predicciones sobre CoViD-19

Manuel Febrero-Bande

Dpt. de Estadística, Análisis Matemático y Optimización
Univ. de Santiago de Compostela

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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: 05/05/2021

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	0.015	0.003	0.012	0.004	0.002	0.005	0.484	0.896	0.576
H4	0.048	0.026	0.044	0.039	0.022	0.038	0.819	0.91	0.836
H8	0.199	0.121	0.186	0.175	0.094	0.166	0.826	0.903	0.838
H12	0.584	0.372	0.549	0.628	0.335	0.575	0.799	0.882	0.811
H15	1.273	0.84	1.204	1.316	0.689	1.199	0.757	0.852	0.77

Tabla Previsión Confirmados: Mod. No Paramétrico.

Last=05/05/2021

	Last	IA14	IA7	H1	H4	H8	H12	H15
España	3559239	169	63	3566661	3587077	3618982	3651759	3682004
Andalucía	557448	162	70	558742	562260	567781	573373	578543
Aragón	119997	262	108	120294	121097	122367	123668	124886
Asturias	51098	83	22	51189	51444	51836	52243	52614
Canarias	53397	77	32	53555	53974	54631	55280	55888
Cantabria	29284	203	78	29389	29671	30095	30512	30903
Castilla.y.León	224755	152	60	225107	226108	227656	229311	230854
Castilla.La.Mancha	186977	168	59	187304	188220	189641	191134	192514
Cataluña	591080	224	80	592654	596846	603457	610119	616355
Ceuta	5769	76	18	5778	5803	5840	5880	5917
Comunidad.Valenciana	391263	31	10	391624	392679	394378	396294	398163
Extremadura	74309	88	38	74408	74693	75136	75618	76074
Galicia	123017	81	32	123222	123801	124699	125650	126535
Islas.Baleares	59564	48	20	59633	59833	60146	60493	60825
La.Rioja	29962	214	78	30025	30198	30468	30746	31003
Madrid	691065	266	94	692755	697305	704458	711631	718275
Melilla	8790	224	76	8809	8860	8941	9023	9097
Murcia	111225	59	23	111346	111697	112248	112863	113455
Navarra	60631	260	101	60789	61211	61875	62541	63162
País.Vasco	189608	354	114	190308	192249	194990	197671	200102

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

Tabla Previsión Confirmados: Mod. Aditivo.

Last=05/05/2021

	Last	IA14	IA7	H1	H4	H8	H12	H15
España	3559239	169	63	3562983	3573815	3586970	3597717	3605568
Andalucía	557448	162	70	558215	560298	562996	565086	566406
Aragón	119997	262	108	120236	120839	121614	122360	122981
Asturias	51098	83	22	51107	51153	51177	51156	51105
Canarias	53397	77	32	53494	53749	54099	54351	54538
Cantabria	29284	203	78	29352	29520	29716	29879	29982
Castilla.y.León	224755	152	60	224964	225574	226400	227228	227949
Castilla.La.Mancha	186977	168	59	187124	187548	188001	188396	188661
Cataluña	591080	224	80	591998	594304	596571	598555	599468
Ceuta	5769	76	18	5769	5771	5774	5772	5769
Comunidad.Valenciana	391263	31	10	391314	391695	392190	393224	394238
Extremadura	74309	88	38	74373	74552	74797	75071	75292
Galicia	123017	81	32	123140	123489	123930	124366	124720
Islas.Baleares	59564	48	20	59600	59719	59888	60107	60314
La.Rioja	29962	214	78	29994	30080	30152	30217	30235
Madrid	691065	266	94	691802	694082	697237	699679	702171
Melilla	8790	224	76	8798	8821	8845	8866	8880
Murcia	111225	59	23	111273	111452	111685	112032	112359
Navarra	60631	260	101	60722	60961	61239	61456	61585
País.Vasco	189608	354	114	189982	190658	190918	191086	190453

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

Tabla Ratio Incr. Confirmados: Mod. Lineal.

Last=05/05/2021

	Last	H1	H4	H8	H12	H15
España	0.0013	0.0018	0.0046	0.0088	0.0111	0.0139
Andalucía	0.0015	0.0020	0.0057	0.0111	0.0147	0.0184
Aragón	0.0018	0.0025	0.0071	0.0140	0.0192	0.0246
Asturias	0.0007	0.0010	0.0017	0.0025	0.0011	0.0007
Canarias	0.0019	0.0023	0.0071	0.0139	0.0190	0.0242
Cantabria	0.0024	0.0029	0.0086	0.0168	0.0232	0.0293
Castilla.y.León	0.0009	0.0016	0.0039	0.0077	0.0096	0.0122
Castilla.La.Mancha	0.0010	0.0015	0.0035	0.0063	0.0071	0.0086
Cataluña	0.0016	0.0022	0.0059	0.0110	0.0143	0.0176
Ceuta	0.0004	0.0007	0.0010	0.0012	0.0000	0.0000
Comunidad.Valenciana	0.0002	0.0008	0.0013	0.0026	0.0020	0.0028
Extremadura	0.0008	0.0014	0.0034	0.0068	0.0083	0.0106
Galicia	0.0010	0.0017	0.0042	0.0080	0.0100	0.0125
Islas.Baleares	0.0006	0.0012	0.0027	0.0055	0.0065	0.0084
La.Rioja	0.0012	0.0019	0.0045	0.0079	0.0095	0.0114
Madrid	0.0014	0.0019	0.0050	0.0099	0.0127	0.0163
Melilla	0.0012	0.0018	0.0044	0.0078	0.0094	0.0114
Murcia	0.0004	0.0011	0.0022	0.0043	0.0046	0.0059
Navarra	0.0016	0.0022	0.0060	0.0114	0.0150	0.0187
País.Vasco	0.0020	0.0021	0.0053	0.0085	0.0095	0.0099

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

Tabla Ratio Incr. Confirmados: Mod. No Paramétrico.

Last=05/05/2021

	Last	H1	H4	H8	H12	H15
España	0.0013	0.0021	0.0078	0.0168	0.0260	0.0345
Andalucía	0.0015	0.0023	0.0086	0.0185	0.0286	0.0378
Aragón	0.0018	0.0025	0.0092	0.0197	0.0306	0.0407
Asturias	0.0007	0.0018	0.0068	0.0144	0.0224	0.0297
Canarias	0.0019	0.0030	0.0108	0.0231	0.0353	0.0466
Cantabria	0.0024	0.0036	0.0132	0.0277	0.0419	0.0553
Castilla.y.León	0.0009	0.0016	0.0060	0.0129	0.0203	0.0271
Castilla.La.Mancha	0.0010	0.0017	0.0067	0.0142	0.0222	0.0296
Cataluña	0.0016	0.0027	0.0098	0.0209	0.0322	0.0428
Ceuta	0.0004	0.0015	0.0058	0.0124	0.0193	0.0256
Comunidad.Valenciana	0.0002	0.0009	0.0036	0.0080	0.0129	0.0176
Extremadura	0.0008	0.0013	0.0052	0.0111	0.0176	0.0238
Galicia	0.0010	0.0017	0.0064	0.0137	0.0214	0.0286
Islas.Baleares	0.0006	0.0012	0.0045	0.0098	0.0156	0.0212
La.Rioja	0.0012	0.0021	0.0079	0.0169	0.0262	0.0347
Madrid	0.0014	0.0024	0.0090	0.0194	0.0298	0.0394
Melilla	0.0012	0.0021	0.0080	0.0172	0.0265	0.0350
Murcia	0.0004	0.0011	0.0042	0.0092	0.0147	0.0200
Navarra	0.0016	0.0026	0.0096	0.0205	0.0315	0.0417
País.Vasco	0.0020	0.0037	0.0139	0.0284	0.0425	0.0553

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

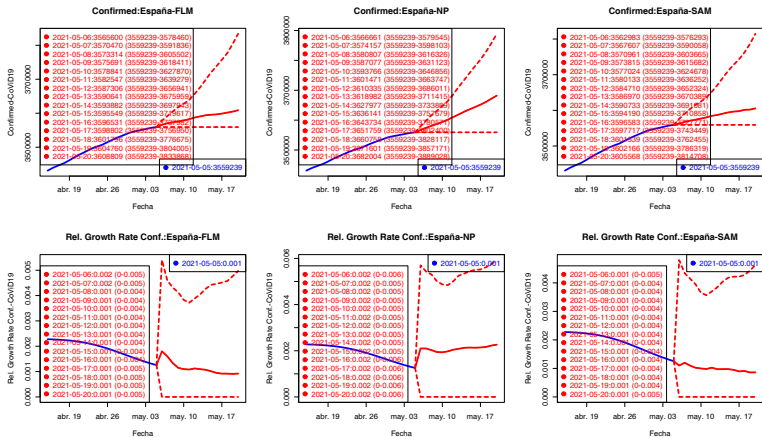
Tabla Ratio Incr. Confirmados: Mod. Aditivo.

Last=05/05/2021

	Last	H1	H4	H8	H12	H15
España	0.0013	0.0011	0.0041	0.0078	0.0108	0.0130
Andalucía	0.0015	0.0014	0.0051	0.0100	0.0137	0.0161
Aragón	0.0018	0.0020	0.0070	0.0135	0.0197	0.0249
Asturias	0.0007	0.0002	0.0011	0.0016	0.0011	0.0001
Canarias	0.0019	0.0018	0.0066	0.0131	0.0179	0.0214
Cantabria	0.0024	0.0023	0.0081	0.0147	0.0203	0.0238
Castilla.y.León	0.0009	0.0009	0.0036	0.0073	0.0110	0.0142
Castilla.La.Mancha	0.0010	0.0008	0.0031	0.0055	0.0076	0.0090
Cataluña	0.0016	0.0016	0.0055	0.0093	0.0126	0.0142
Ceuta	0.0004	0.0000	0.0004	0.0008	0.0005	0.0000
Comunidad.Valenciana	0.0002	0.0001	0.0011	0.0024	0.0050	0.0076
Extremadura	0.0008	0.0009	0.0033	0.0066	0.0103	0.0132
Galicia	0.0010	0.0010	0.0038	0.0074	0.0110	0.0138
Islas.Baleares	0.0006	0.0006	0.0026	0.0054	0.0091	0.0126
La.Rioja	0.0012	0.0011	0.0039	0.0063	0.0085	0.0091
Madrid	0.0014	0.0011	0.0044	0.0089	0.0125	0.0161
Melilla	0.0012	0.0009	0.0035	0.0062	0.0086	0.0102
Murcia	0.0004	0.0004	0.0020	0.0041	0.0073	0.0102
Navarra	0.0016	0.0015	0.0055	0.0100	0.0136	0.0157
País.Vasco	0.0020	0.0020	0.0055	0.0069	0.0078	0.0045

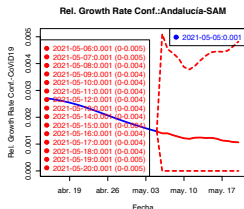
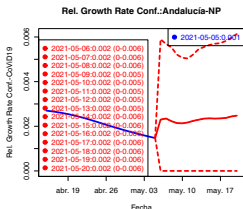
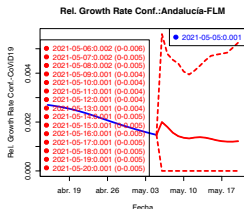
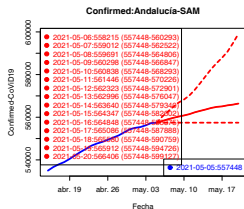
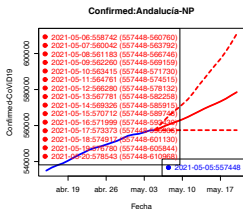
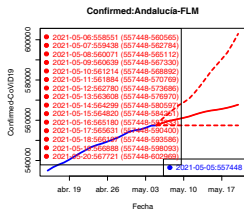
Cuadro: Previsión Ratio Incr. Confirmados: Mod. Aditivo - Horiz. (días).

Confirmados: España



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

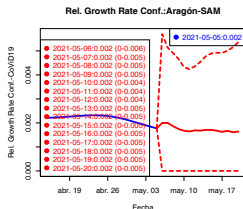
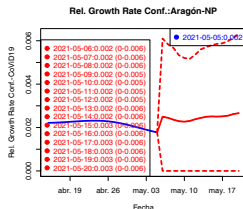
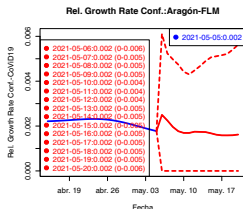
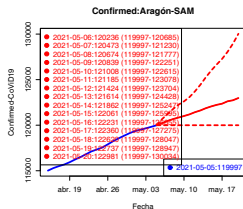
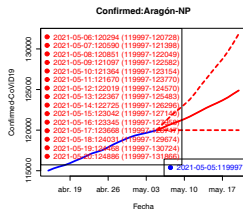
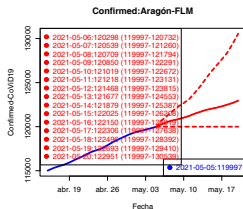
Confirmados: Andalucía



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

◀ Confirmados ▶ Fallecidos

Confirmados: Aragón

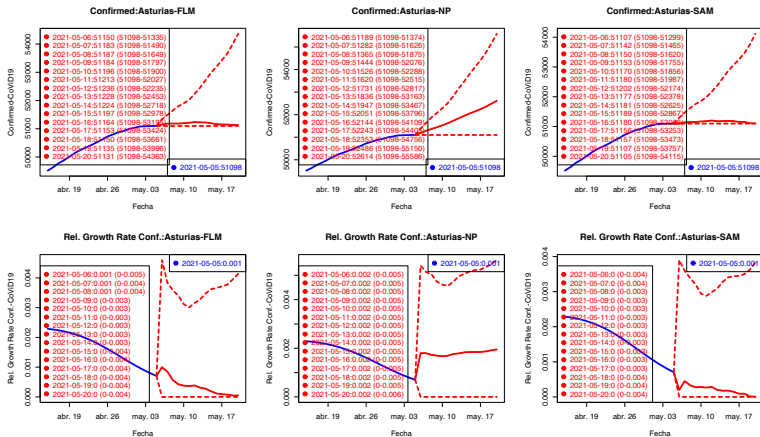


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Asturias



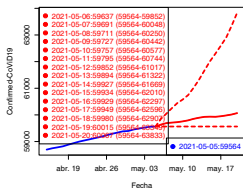
Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

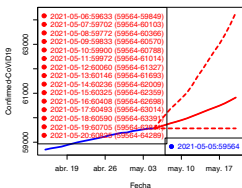
◀ Fallecidos

Confirmados: Islas Baleares

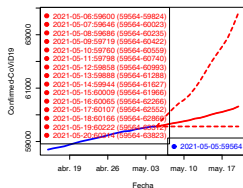
Confirmed:Islas.Baleares-FLM



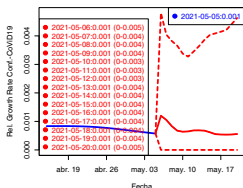
Confirmed:Islas.Baleares-NP



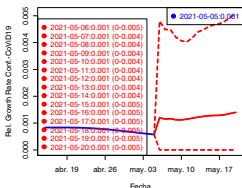
Confirmed:Islas.Baleares-SAM



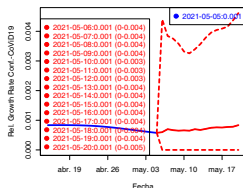
Rel. Growth Rate Conf.:Islas.Baleares-FLM



Rel. Growth Rate Conf.:Islas.Baleares-NP



Rel. Growth Rate Conf.:Islas.Baleares-SAM

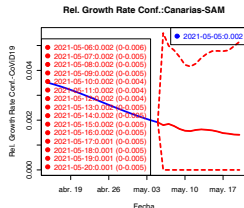
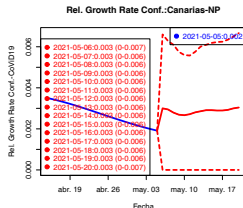
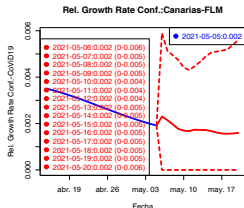
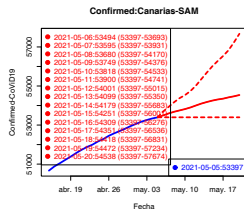
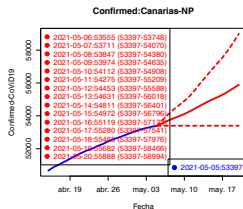
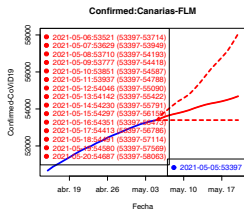


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

← Confirmados

← Fallecidos

Confirmados: Canarias

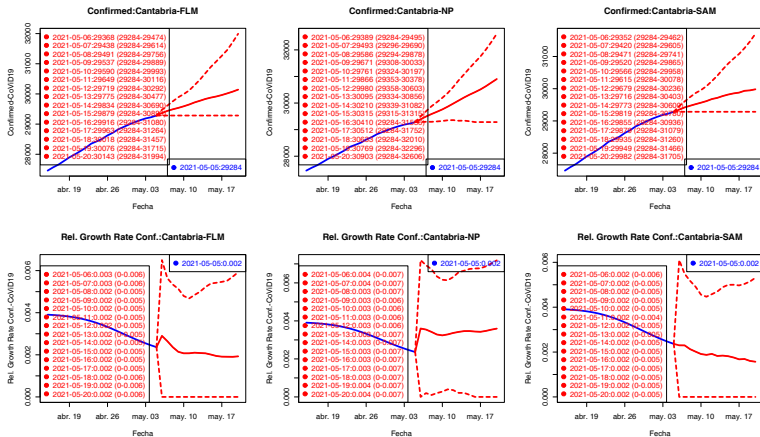


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Cantabria

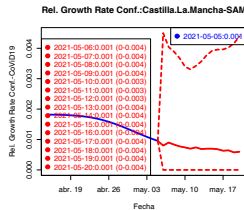
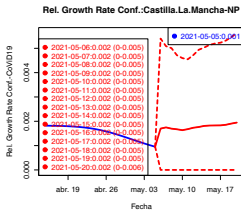
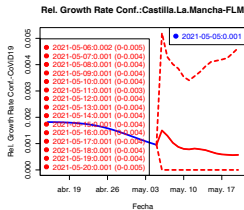
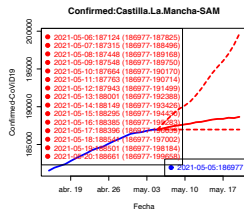
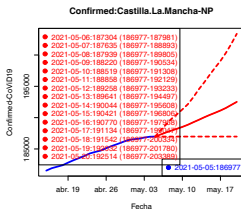
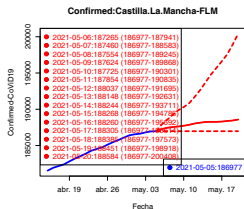


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Castilla-La Mancha

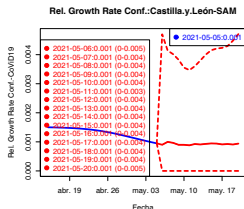
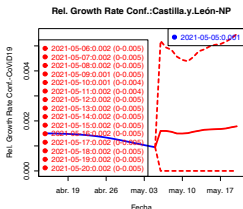
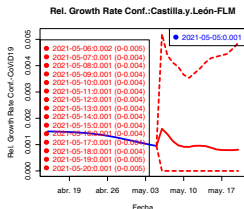
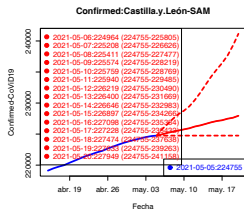
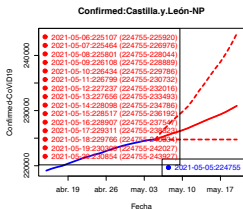
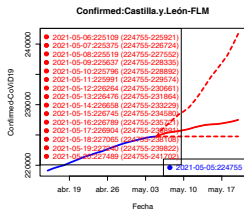


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Castilla y León

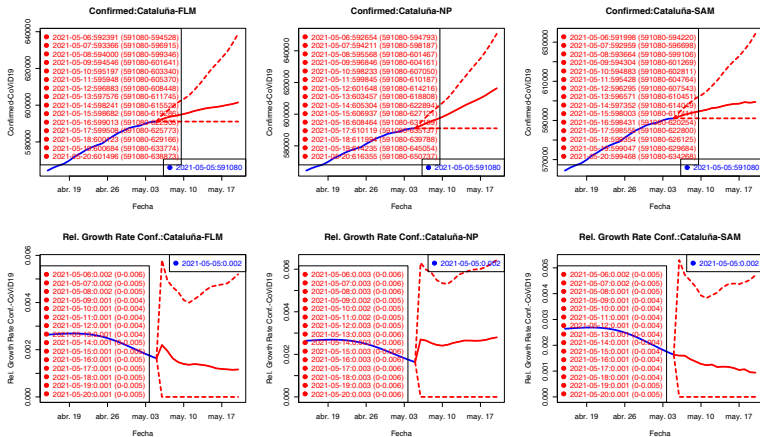


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Cataluña



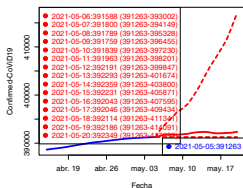
Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

← Confirmados

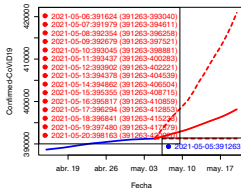
← Fallecidos

Confirmados: C. Valenciana

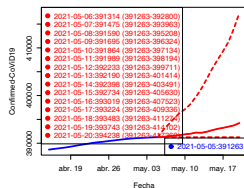
Confirmed:Comunidad.Valenciana-FLM



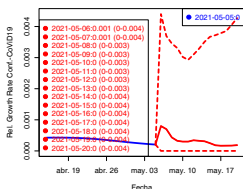
Confirmed:Comunidad.Valenciana-NP



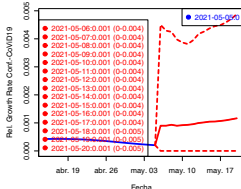
Confirmed:Comunidad.Valenciana-SAM



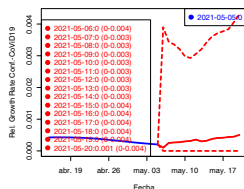
Rel. Growth Rate Conf.:Comunidad.Valenciana-FLM



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



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



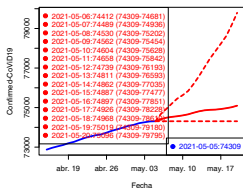
Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

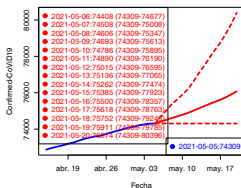
◀ Fallecidos

Confirmados: Extremadura

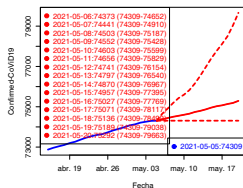
Confirmed:Extremadura-FLM



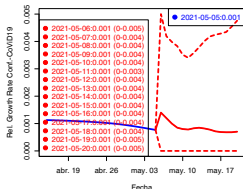
Confirmed:Extremadura-NP



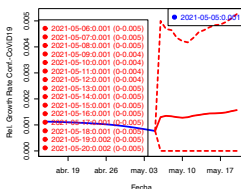
Confirmed:Extremadura-SAM



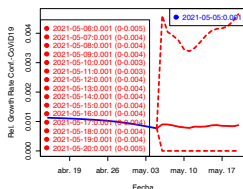
Rel. Growth Rate Conf.:Extremadura-FLM



Rel. Growth Rate Conf.:Extremadura-NP



Rel. Growth Rate Conf.:Extremadura-SAM



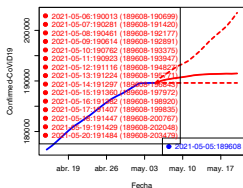
Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

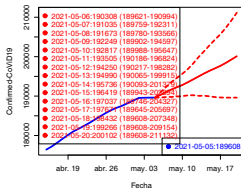
◀ Fallecidos

Confirmados: País Vasco

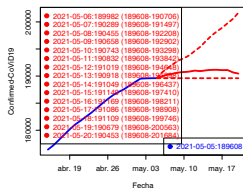
Confirmed:País.Vasco-FLM



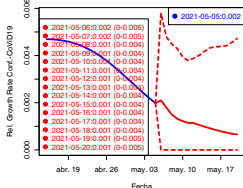
Confirmed:País.Vasco-NP



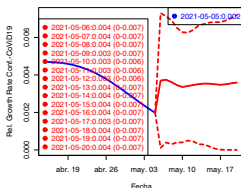
Confirmed:País.Vasco-SAM



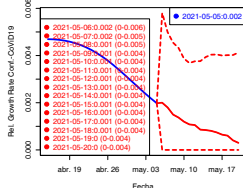
Rel. Growth Rate Conf.:País.Vasco-FLM



Rel. Growth Rate Conf.:País.Vasco-NP



Rel. Growth Rate Conf.:País.Vasco-SAM

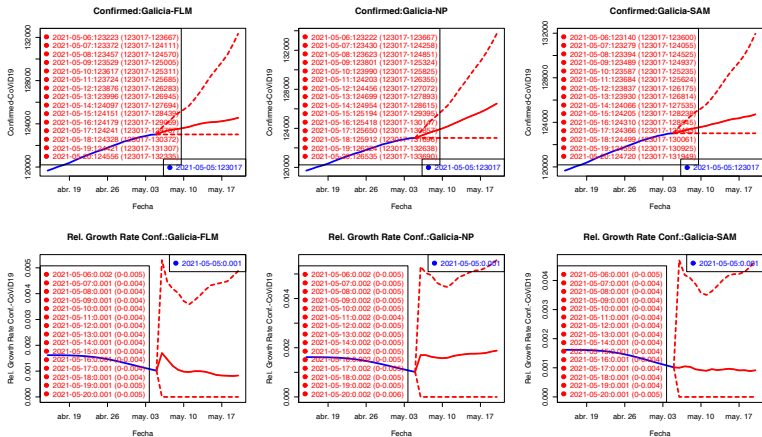


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Galicia

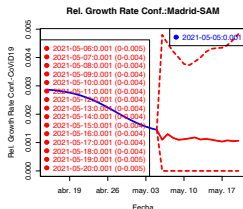
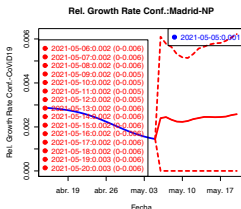
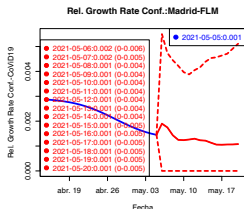
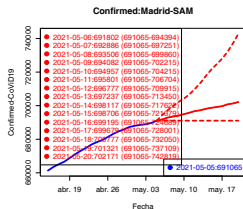
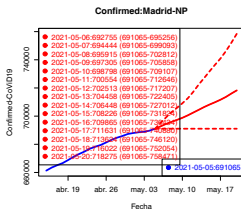
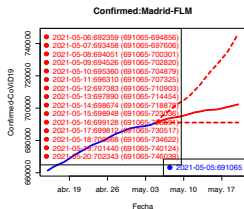


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Madrid

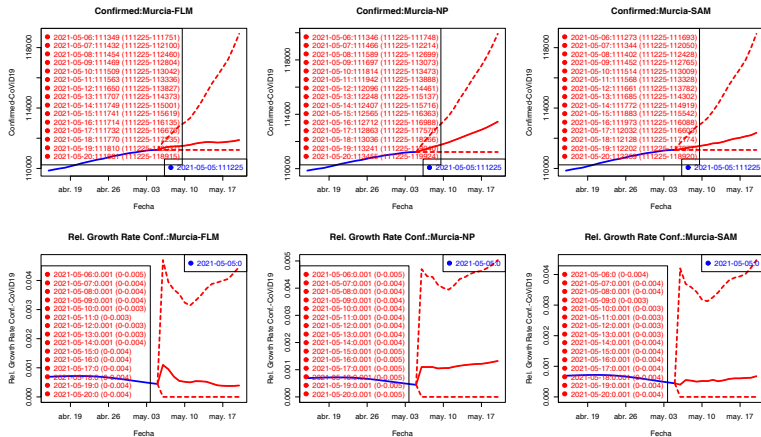


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Murcia



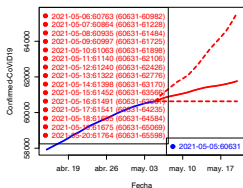
Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

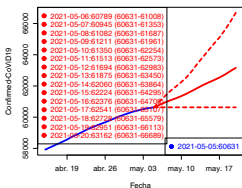
◀ Fallecidos

Confirmados: Navarra

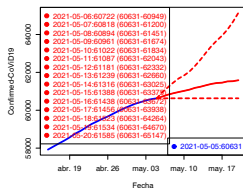
Confirmed:Navarra-FLM



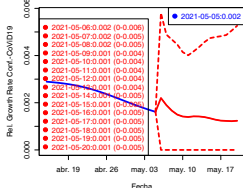
Confirmed:Navarra-NP



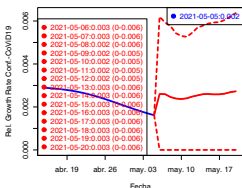
Confirmed:Navarra-SAM



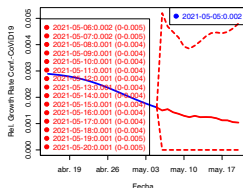
Rel. Growth Rate Conf.:Navarra-FLM



Rel. Growth Rate Conf.:Navarra-NP



Rel. Growth Rate Conf.:Navarra-SAM

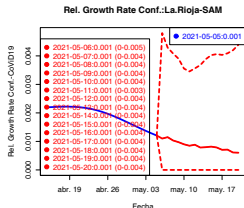
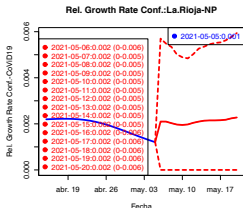
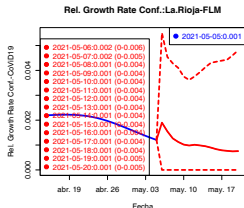
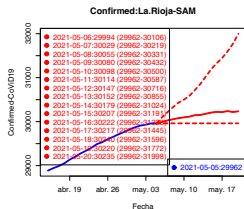
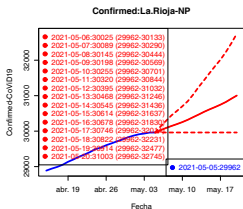
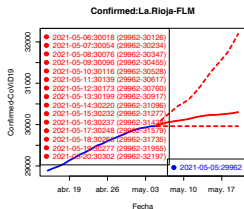


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ 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: 05/05/2021 Fuente: https://cneccovid.isciii.es/covid19/resources/casos_hosp_uci_def_sexo_edad_provres.csv

Predicciones:

▶ España

► Andalucía

► Aragón

▶ Asturias

▶ I. Balears

▶ **Canarias**

► **Cantabria**

► **Castilla-La Mancha**

► **Castilla y León**

▶ Cataluña

► C. Valenciana

► Extremadura

▶ País Vasco

▶ Galicia

▶ Madrid

► Murcia

▶ Navarra

► La Rioja

► Mod Lineal

▶ Mod NP

▶ Mod Aditivo

	$10^2 \sigma_R^2$			$10^2 \sigma_R^2(\text{rob.})$			r^2		
Horiz	FLM	NP	SAM	FLM	NP	SAM	FLM	NP	SAM
H1	0.005	0.004	0.004	0.001	0.001	0.001	0.566	0.627	0.57
H4	0.018	0.017	0.017	0.008	0.009	0.007	0.82	0.833	0.832
H8	0.061	0.065	0.056	0.034	0.039	0.028	0.859	0.854	0.87
H12	0.13	0.141	0.116	0.088	0.097	0.073	0.865	0.858	0.88
H15	0.205	0.229	0.173	0.158	0.19	0.13	0.873	0.862	0.893

Tabla Previsión Fallecidos: Mod. Lineal.

Last=05/05/2021

	Last	H1	H4	H8	H12	H15
España	78330	78371	78405	78455	78355	78330
Andalucía	9611	9618	9627	9640	9634	9624
Aragón	3428	3430	3433	3437	3435	3431
Asturias	1946	1946	1946	1946	1946	1946
Canarias	728	729	731	732	733	732
Cantabria	558	558	559	559	559	558
Castilla y León	6722	6725	6726	6730	6722	6722
Castilla-La Mancha	5856	5859	5863	5868	5863	5856
Cataluña	14114	14118	14119	14118	14114	14114
Ceuta	109	110	111	114	116	118
Comunidad Valenciana	7291	7293	7291	7291	7291	7291
Extremadura	1776	1777	1777	1779	1777	1776
Galicia	2376	2377	2377	2377	2376	2376
Islas Baleares	825	825	825	825	825	825
La Rioja	761	761	762	762	761	761
Madrid	15109	15119	15130	15148	15134	15110
Melilla	93	94	95	98	101	103
Murcia	1590	1591	1590	1590	1590	1590
Navarra	1164	1166	1169	1174	1177	1178
País Vasco	4273	4275	4278	4278	4273	4273

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

Tabla Previsión Fallecidos: Mod. No Paramétrico.

Last=05/05/2021

	Last	H1	H4	H8	H12	H15
España	78330	78418	78712	79162	79593	80005
Andalucía	9611	9624	9664	9728	9789	9848
Aragón	3428	3432	3445	3465	3485	3503
Asturias	1946	1948	1955	1965	1975	1984
Canarias	728	730	734	740	747	753
Cantabria	558	559	561	564	567	570
Castilla y León	6722	6729	6753	6789	6823	6856
Castilla-La Mancha	5856	5862	5883	5914	5944	5972
Cataluña	14114	14128	14176	14249	14318	14383
Ceuta	109	110	111	113	115	117
Comunidad Valenciana	7291	7297	7320	7354	7386	7416
Extremadura	1776	1778	1784	1794	1803	1812
Galicia	2376	2378	2387	2399	2411	2422
Islas Baleares	825	826	829	833	836	840
La Rioja	761	762	765	769	773	776
Madrid	15109	15128	15188	15282	15372	15459
Melilla	93	93	94	96	97	98
Murcia	1590	1591	1597	1605	1612	1619
Navarra	1164	1166	1171	1180	1189	1197
País Vasco	4273	4280	4302	4336	4368	4400

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

Tabla Previsión Fallecidos: Mod. Aditivo.

Last=05/05/2021

	Last	H1	H4	H8	H12	H15
España	78330	78350	78456	78587	78619	78606
Andalucía	9611	9615	9632	9655	9663	9670
Aragón	3428	3430	3438	3447	3452	3457
Asturias	1946	1946	1946	1946	1946	1946
Canarias	728	729	731	733	734	736
Cantabria	558	558	558	558	558	558
Castilla.y.León	6722	6723	6732	6742	6750	6752
Castilla.La.Mancha	5856	5857	5865	5870	5877	5871
Cataluña	14114	14115	14129	14129	14117	14114
Ceuta	109	110	111	113	115	117
Comunidad.Valenciana	7291	7291	7294	7300	7307	7306
Extremadura	1776	1776	1779	1783	1786	1788
Galicia	2376	2376	2380	2384	2386	2386
Islas.Baleares	825	825	826	827	828	828
La.Rioja	761	761	762	762	762	761
Madrid	15109	15115	15133	15167	15162	15159
Melilla	93	93	95	97	99	101
Murcia	1590	1590	1592	1593	1595	1596
Navarra	1164	1166	1169	1176	1180	1182
País.Vasco	4273	4275	4284	4295	4287	4280

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

Tabla Ratio Incr. Fallecidos: Mod. Lineal.

Last=05/05/2021

	Last	H1	H4	H8	H12	H15
España	0.0005	0.0005	0.0010	0.0016	0.0003	0.0000
Andalucía	0.0008	0.0007	0.0017	0.0030	0.0024	0.0013
Aragón	0.0006	0.0006	0.0014	0.0026	0.0020	0.0008
Asturias	0.0002	0.0001	0.0000	0.0000	0.0000	0.0000
Canarias	0.0013	0.0011	0.0036	0.0055	0.0062	0.0056
Cantabria	0.0005	0.0005	0.0014	0.0020	0.0013	0.0000
Castilla.y.León	0.0004	0.0005	0.0007	0.0011	0.0000	0.0000
Castilla.La.Mancha	0.0005	0.0006	0.0012	0.0021	0.0012	0.0000
Cataluña	0.0003	0.0003	0.0004	0.0003	0.0000	0.0000
Ceuta	0.0056	0.0059	0.0203	0.0446	0.0646	0.0819
Comunidad.Valenciana	0.0001	0.0002	0.0000	0.0000	0.0000	0.0000
Extremadura	0.0004	0.0005	0.0008	0.0014	0.0003	0.0000
Galicia	0.0003	0.0004	0.0003	0.0005	0.0000	0.0000
Islas.Baleares	0.0002	0.0004	0.0001	0.0000	0.0000	0.0000
La.Rioja	0.0005	0.0005	0.0010	0.0011	0.0000	0.0000
Madrid	0.0007	0.0007	0.0014	0.0026	0.0016	0.0001
Melilla	0.0056	0.0060	0.0218	0.0573	0.0812	0.1112
Murcia	0.0002	0.0003	0.0000	0.0000	0.0000	0.0000
Navarra	0.0014	0.0016	0.0044	0.0089	0.0115	0.0123
País.Vasco	0.0009	0.0005	0.0011	0.0011	0.0000	0.0000

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

Tabla Ratio Incr. Fallecidos: Mod. No Paramétrico.

Last=05/05/2021

	Last	H1	H4	H8	H12	H15
España	0.0005	0.0011	0.0049	0.0106	0.0161	0.0214
Andalucía	0.0008	0.0014	0.0056	0.0121	0.0185	0.0246
Aragón	0.0006	0.0012	0.0050	0.0109	0.0165	0.0219
Asturias	0.0002	0.0010	0.0046	0.0099	0.0149	0.0197
Canarias	0.0013	0.0021	0.0077	0.0170	0.0257	0.0343
Cantabria	0.0005	0.0011	0.0048	0.0105	0.0159	0.0211
Castilla.y.León	0.0004	0.0010	0.0046	0.0099	0.0150	0.0199
Castilla.La.Mancha	0.0005	0.0010	0.0045	0.0099	0.0150	0.0198
Cataluña	0.0003	0.0010	0.0044	0.0095	0.0144	0.0191
Ceuta	0.0056	0.0048	0.0169	0.0372	0.0560	0.0723
Comunidad.Valenciana	0.0001	0.0009	0.0040	0.0086	0.0130	0.0171
Extremadura	0.0004	0.0010	0.0046	0.0100	0.0151	0.0200
Galicia	0.0003	0.0010	0.0045	0.0097	0.0147	0.0194
Islas.Baleares	0.0002	0.0009	0.0042	0.0092	0.0139	0.0183
La.Rioja	0.0005	0.0011	0.0046	0.0101	0.0153	0.0202
Madrid	0.0007	0.0012	0.0052	0.0114	0.0174	0.0231
Melilla	0.0056	0.0035	0.0122	0.0277	0.0420	0.0562
Murcia	0.0002	0.0009	0.0042	0.0092	0.0138	0.0183
Navarra	0.0014	0.0016	0.0063	0.0140	0.0213	0.0286
País.Vasco	0.0009	0.0018	0.0067	0.0147	0.0223	0.0298

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

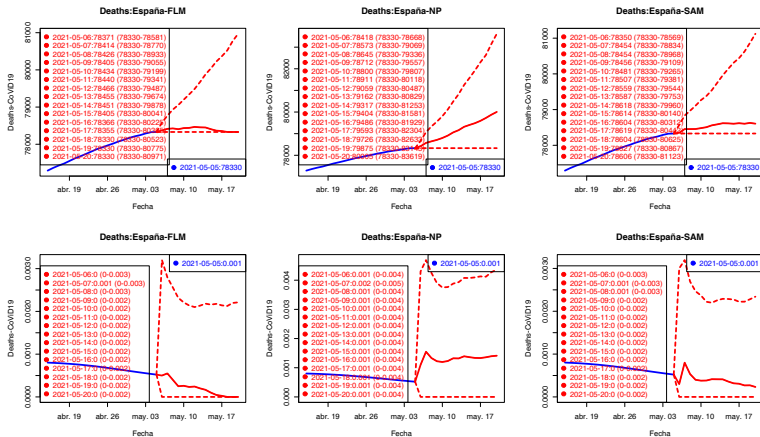
Tabla Ratio Incr. Fallecidos: Mod. Aditivo.

Last=05/05/2021

	Last	H1	H4	H8	H12	H15
España	0.0005	0.0003	0.0016	0.0033	0.0037	0.0035
Andalucía	0.0008	0.0005	0.0021	0.0046	0.0054	0.0062
Aragón	0.0006	0.0005	0.0029	0.0056	0.0071	0.0084
Asturias	0.0002	0.0000	0.0001	0.0002	0.0000	0.0000
Canarias	0.0013	0.0008	0.0036	0.0062	0.0089	0.0105
Cantabria	0.0005	0.0002	0.0007	0.0000	0.0000	0.0000
Castilla.y.León	0.0004	0.0002	0.0015	0.0029	0.0042	0.0045
Castilla.La.Mancha	0.0005	0.0002	0.0015	0.0024	0.0036	0.0026
Cataluña	0.0003	0.0000	0.0010	0.0010	0.0002	0.0000
Ceuta	0.0056	0.0049	0.0166	0.0375	0.0587	0.0736
Comunidad.Valenciana	0.0001	0.0000	0.0005	0.0012	0.0022	0.0020
Extremadura	0.0004	0.0002	0.0019	0.0037	0.0057	0.0066
Galicia	0.0003	0.0001	0.0015	0.0033	0.0040	0.0044
Islas.Baleares	0.0002	0.0000	0.0011	0.0024	0.0035	0.0037
La.Rioja	0.0005	0.0001	0.0011	0.0009	0.0012	0.0000
Madrid	0.0007	0.0004	0.0016	0.0039	0.0035	0.0033
Melilla	0.0056	0.0044	0.0167	0.0438	0.0681	0.0901
Murcia	0.0002	0.0000	0.0010	0.0020	0.0035	0.0036
Navarra	0.0014	0.0013	0.0044	0.0101	0.0133	0.0153
País.Vasco	0.0009	0.0004	0.0026	0.0052	0.0032	0.0016

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

Fallecidos: España

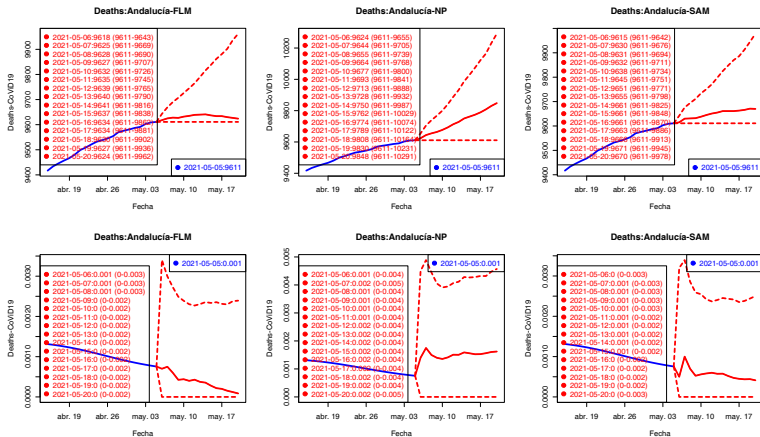


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Andalucía

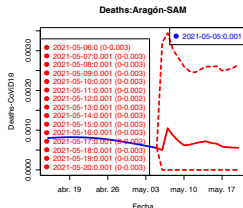
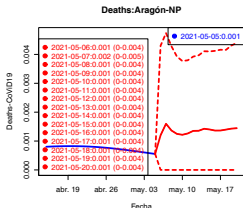
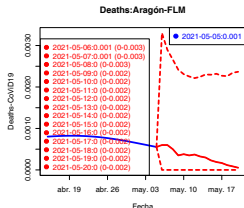
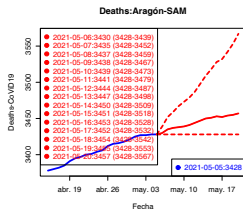
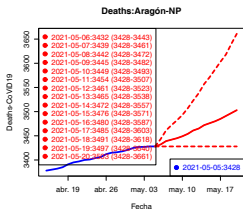
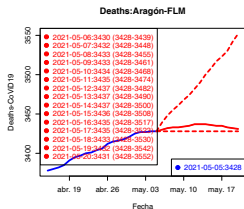


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Aragón



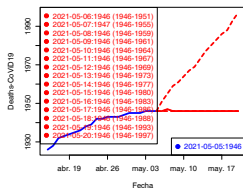
Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

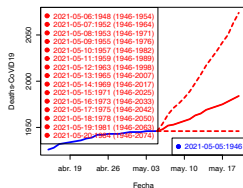
◀ Fallecidos

Fallecidos: Asturias

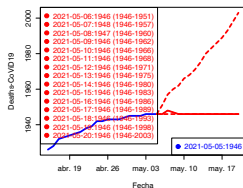
Deaths: Asturias-FLM



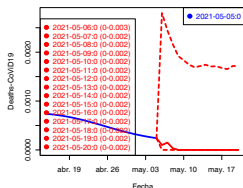
Deaths: Asturias-NP



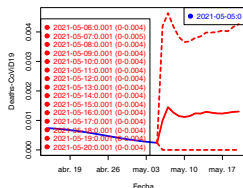
Deaths: Asturias-SAM



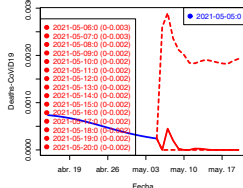
Deaths: Asturias-FLM



Deaths: Asturias-NP



Deaths: Asturias-SAM

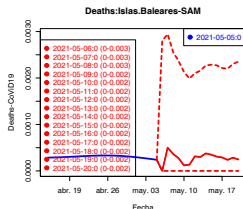
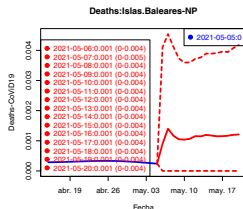
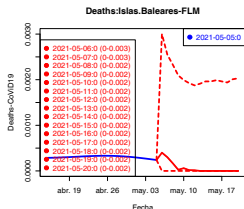
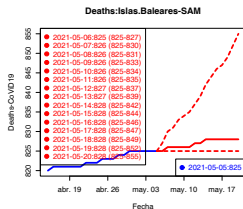
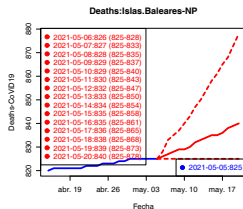
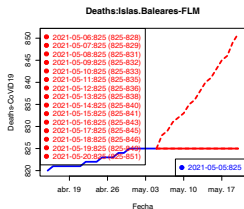


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

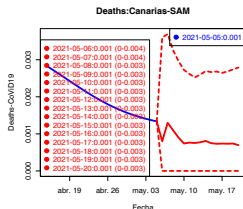
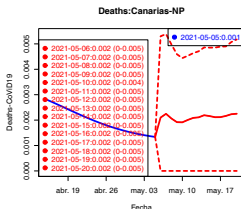
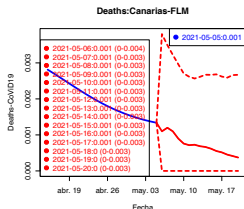
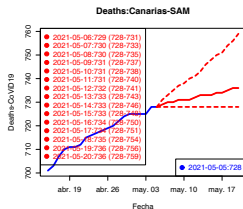
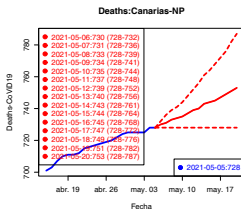
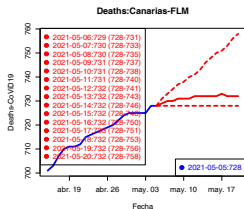
◀ Fallecidos

Fallecidos: Islas Baleares



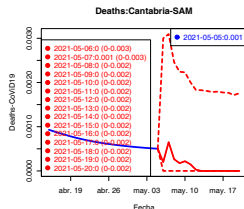
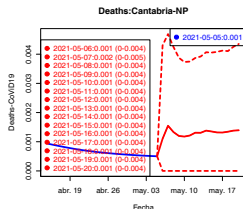
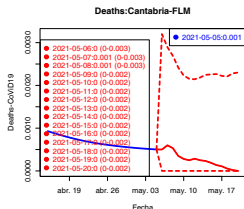
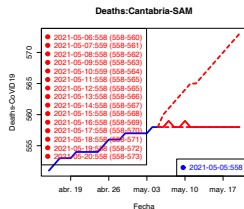
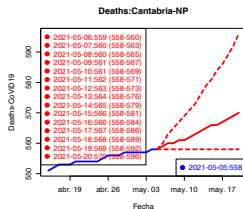
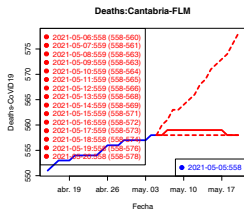
Los valores del Ratio de incremento de H2–H15 están rescalados a H1 para su comparación gráfica.

Fallecidos: Canarias



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

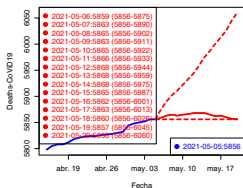
Fallecidos: Cantabria



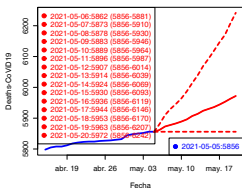
Los valores del Ratio de incremento de H2–H15 están rescalados a H1 para su comparación gráfica.

Fallecidos: Castilla-La Mancha

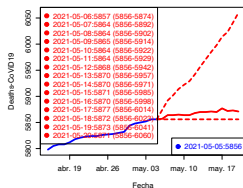
Deaths:Castilla.La.Mancha-FLM



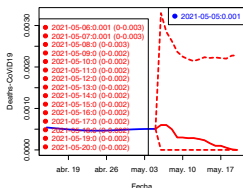
Deaths:Castilla.La.Mancha-NP



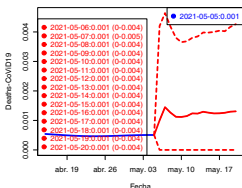
Deaths:Castilla.La.Mancha-SAM



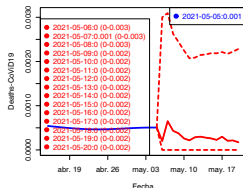
Deaths:Castilla.La.Mancha-FLM



Deaths:Castilla.La.Mancha-NP



Deaths:Castilla.La.Mancha-SAM

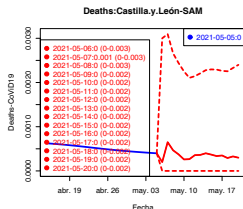
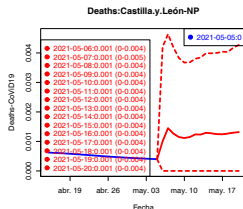
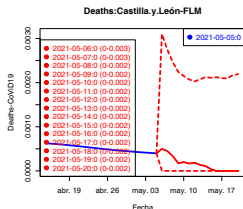
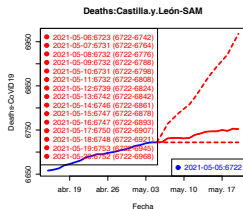
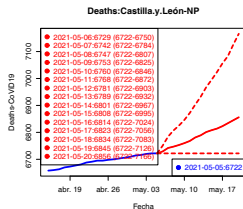
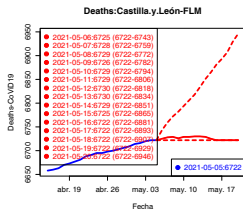


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Castilla y León

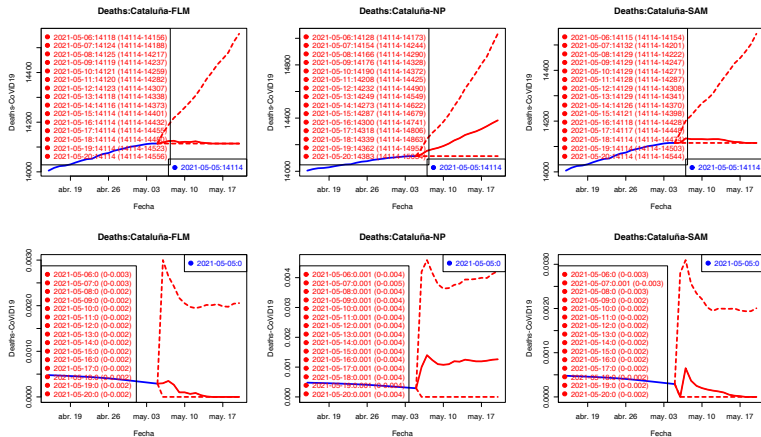


Los valores del Ratio de incremento de H2–H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

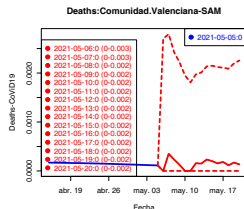
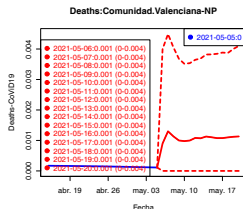
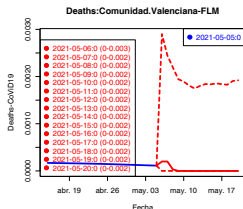
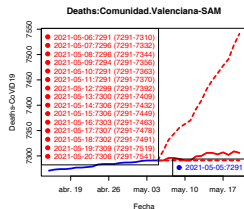
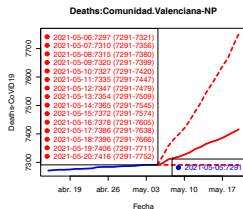
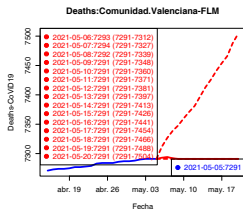
Fallecidos: Cataluña



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

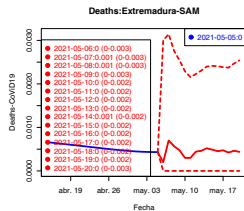
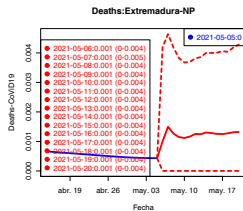
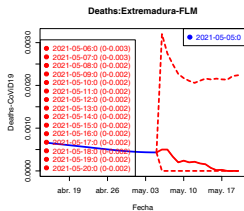
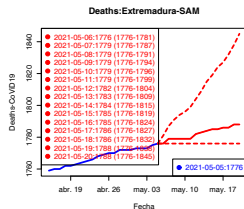
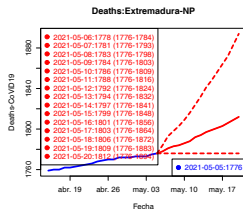
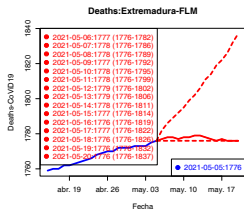
◀ Confirmados ▶ Fallecidos

Fallecidos: C. Valenciana



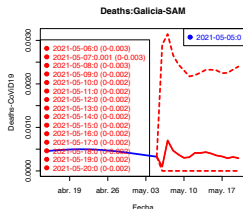
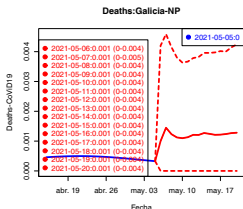
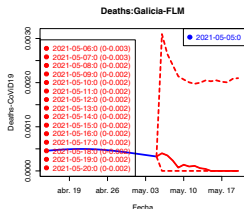
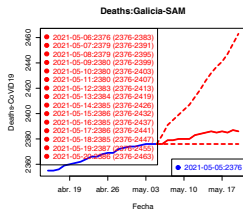
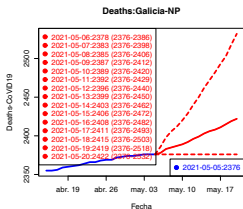
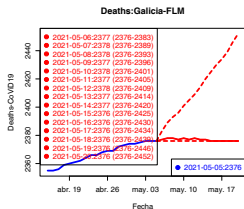
Los valores del Ratio de incremento de H2–H15 están rescalados a H1 para su comparación gráfica.

Fallecidos: Extremadura



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

Fallecidos: Galicia

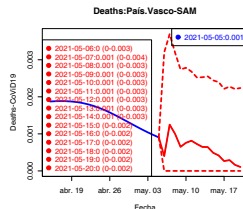
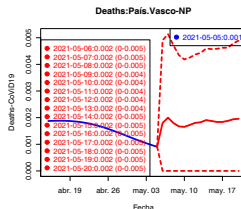
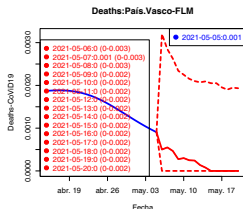
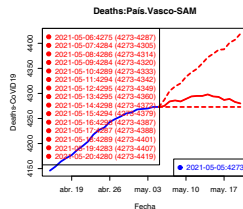
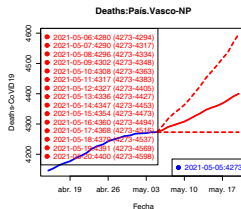
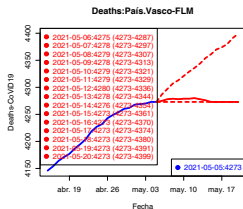


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

Confirmados

Fallecidos

Fallecidos: País Vasco

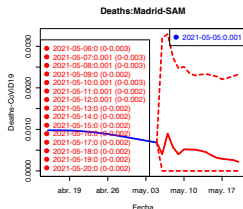
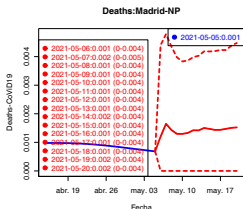
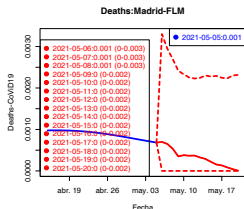
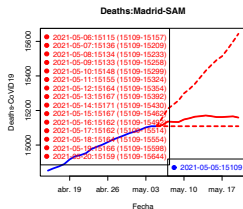
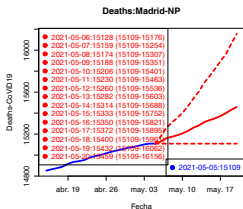
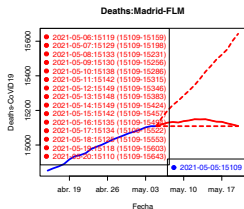


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Madrid

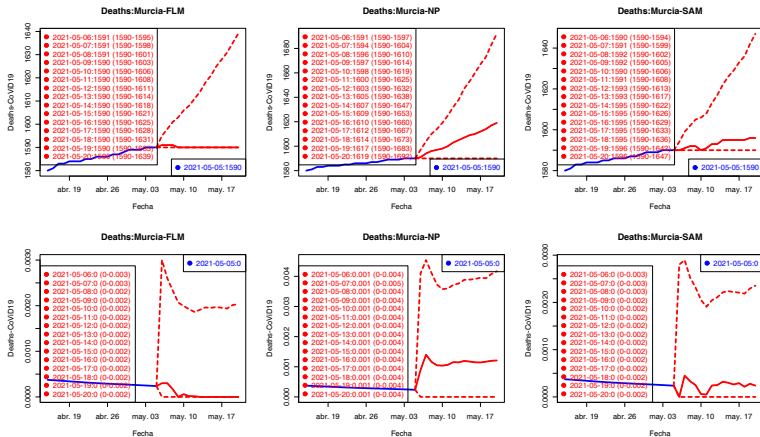


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Murcia

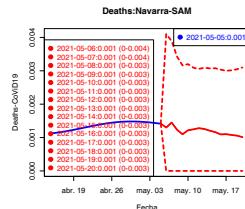
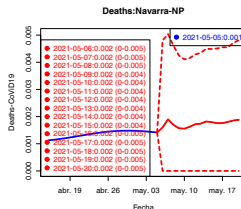
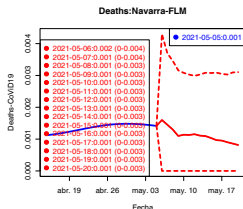
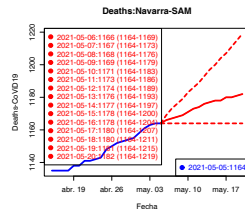
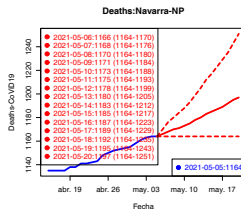
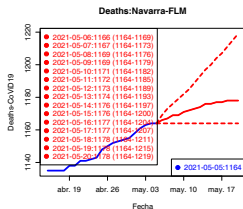


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Navarra

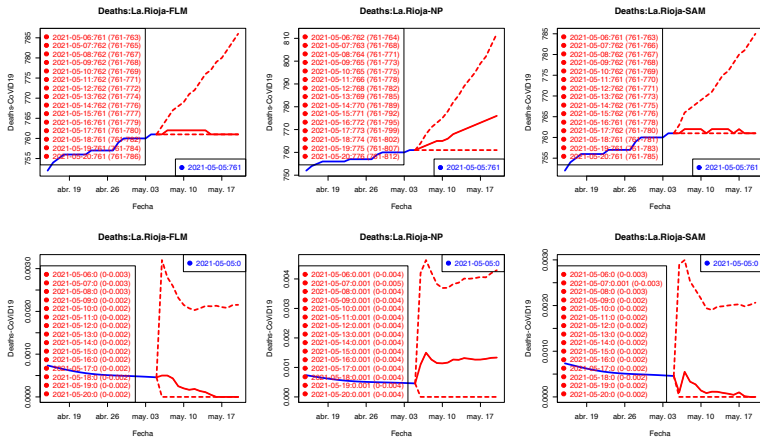


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: La Rioja



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

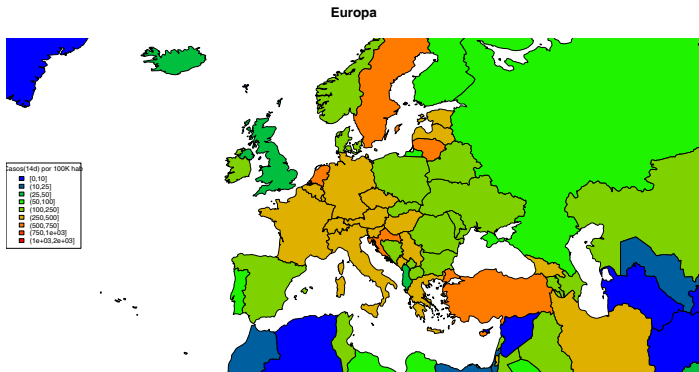
◀ Confirmados

◀ Fallecidos

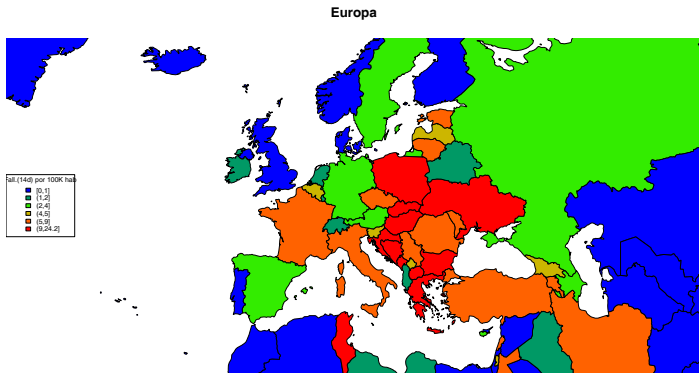
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Europa: Incidencia Acumulada (14d) por 100K hab.

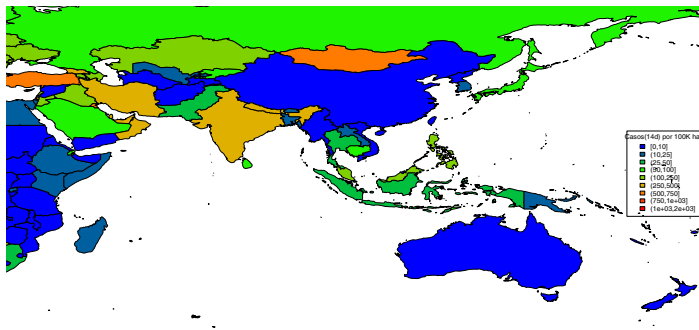


Europa: Fallecidos (14d) por 100K hab.



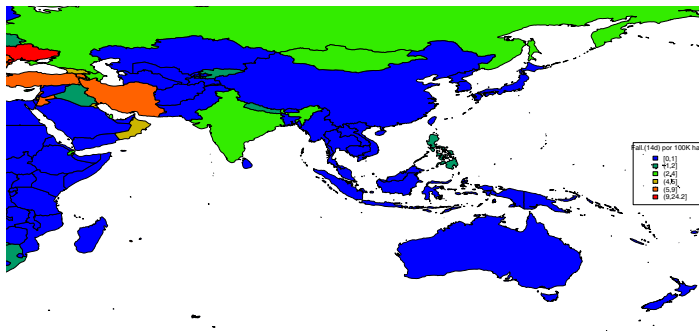
Asia y Oceanía: Incidencia acumulada (14d) por 100K hab.

Asia y Oceanía



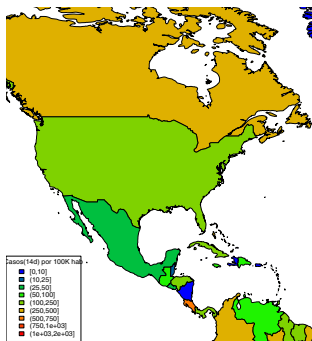
Asia y Oceanía: Fallecidos (14d) por 100K hab.

Asia y Oceanía

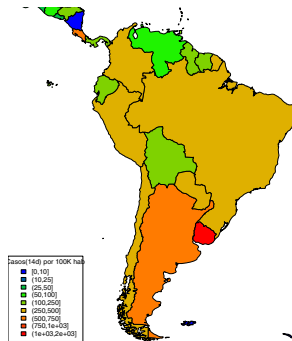


América: Incidencia acumulada (14d) por 100K hab.

América del Norte

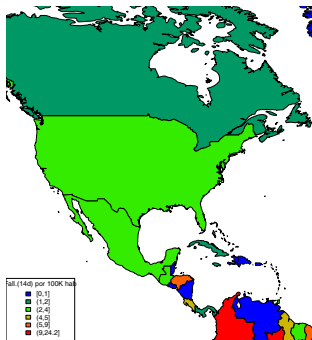


América del sur

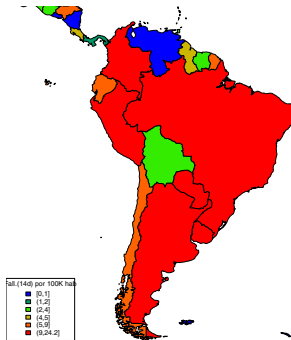


América: Fallecidos (14d) por 100K hab.

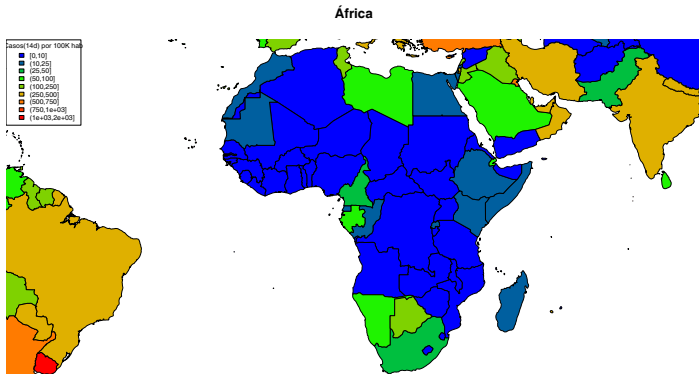
América del Norte



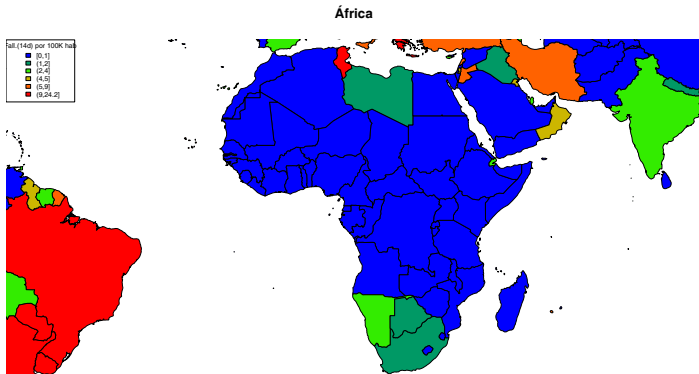
América del sur



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.