

Predicciones sobre CoViD-19

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ANÁLISE MATEMÁTICA E OPTIMIZACIÓN



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Tabla Previsión Confirmados: Mod. Lineal.

Last=30/05/2021

	Last	IA14	IA7	H1	H4	H8	H12	H15
España	3678402	102	39	3683289	3688609	3697227	3698772	3702952
Andalucía	584926	149	63	586084	587981	590718	592485	594258
Aragón	124203	139	47	124379	124568	124872	124936	125100
Asturias	52382	56	23	52445	52505	52605	52605	52638
Canarias	56387	61	23	56493	56645	56853	56958	57074
Cantabria	30272	75	32	30317	30386	30506	30569	30658
Castilla.y.León	231152	114	46	231461	231812	232405	232566	232895
Castilla.La.Mancha	192809	100	36	193006	193159	193438	193318	193379
Cataluña	611807	93	30	612508	612973	613695	613185	613197
Ceuta	5872	110	86	5887	5923	5988	6047	6109
Comunidad.Valenciana	394581	29	12	394919	395087	395652	395435	395718
Extremadura	75758	67	28	75846	75939	76116	76147	76249
Galicia	126908	61	22	127077	127242	127517	127542	127676
Islas.Balears	60473	31	13	60532	60579	60692	60686	60750
La.Rioja	30900	154	70	30952	31031	31161	31237	31326
Madrid	716576	143	50	717481	718352	719750	719714	720266
Melilla	9126	153	60	9139	9154	9178	9184	9195
Murcia	113142	63	23	113264	113352	113533	113492	113559
Navarra	62430	114	52	62514	62641	62873	62988	63158
País.Vasco	198698	155	56	198985	199279	199669	199665	199727

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

Tabla Previsión Confirmados: Mod. No Paramétrico.

Last=30/05/2021

	Last	IA14	IA7	H1	H4	H8	H12	H15
España	3678402	102	39	3683314	3697168	3718474	3741340	3762741
Andalucía	584926	149	63	586014	588998	593640	598425	602845
Aragón	124203	139	47	124380	124877	125642	126454	127211
Asturias	52382	56	23	52445	52623	52899	53200	53485
Canarias	56387	61	23	56505	56822	57316	57815	58274
Cantabria	30272	75	32	30313	30430	30611	30804	30986
Castilla.y.León	231152	114	46	231436	232245	233494	234850	236130
Castilla.La.Mancha	192809	100	36	193048	193725	194764	195888	196942
Cataluña	611807	93	30	612591	614798	618187	621832	625241
Ceuta	5872	110	86	5879	5900	5932	5968	6003
Comunidad.Valenciana	394581	29	12	394918	395901	397475	399242	400963
Extremadura	75758	67	28	75842	76084	76459	76870	77262
Galicia	126908	61	22	127075	127546	128271	129052	129783
Islas.Baleares	60473	31	13	60531	60700	60964	61259	61543
La.Rioja	30900	154	70	30943	31066	31256	31461	31653
Madrid	716576	143	50	717569	720353	724629	729187	733429
Melilla	9126	153	60	9139	9175	9230	9289	9344
Murcia	113142	63	23	113261	113603	114136	114725	115289
Navarra	62430	114	52	62508	62731	63075	63448	63799
País.Vasco	198698	155	56	199022	199917	201299	202743	204078

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

Tabla Previsión Confirmados: Mod. Aditivo.

Last=30/05/2021

	Last	IA14	IA7	H1	H4	H8	H12	H15
España	3678402	102	39	3680924	3687463	3695801	3703951	3710422
Andalucía	584926	149	63	585774	587769	590364	592560	594057
Aragón	124203	139	47	124284	124520	124814	125096	125369
Asturias	52382	56	23	52413	52492	52568	52665	52711
Canarias	56387	61	23	56452	56612	56788	56905	56968
Cantabria	30272	75	32	30302	30383	30509	30638	30764
Castilla.y.León	231152	114	46	231323	231771	232350	233011	233560
Castilla.La.Mancha	192809	100	36	192885	193084	193351	193584	193727
Cataluña	611807	93	30	612063	612723	613446	614096	614583
Ceuta	5872	110	86	5887	5930	6001	6088	6172
Comunidad.Valenciana	394581	29	12	394666	395062	395513	396579	397519
Extremadura	75758	67	28	75801	75925	76097	76313	76497
Galicia	126908	61	22	126992	127215	127494	127775	128048
Islas.Balears	60473	31	13	60493	60569	60670	60839	60987
La.Rioja	30900	154	70	30941	31036	31161	31299	31411
Madrid	716576	143	50	716986	718074	719461	720625	721602
Melilla	9126	153	60	9134	9152	9175	9196	9211
Murcia	113142	63	23	113189	113335	113490	113738	113942
Navarra	62430	114	52	62480	62627	62860	63113	63339
País.Vasco	198698	155	56	198863	199205	199453	199565	199418

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

Tabla Ratio Incr. Confirmados: Mod. Lineal.

Last=30/05/2021

	Last	H1	H4	H8	H12	H15
España	0.0007	0.0013	0.0028	0.0051	0.0055	0.0067
Andalucía	0.0013	0.0020	0.0052	0.0099	0.0129	0.0160
Aragón	0.0008	0.0014	0.0029	0.0054	0.0059	0.0072
Asturias	0.0006	0.0012	0.0023	0.0043	0.0043	0.0049
Canarias	0.0013	0.0019	0.0046	0.0083	0.0101	0.0122
Cantabria	0.0009	0.0015	0.0038	0.0077	0.0098	0.0127
Castilla.y.León	0.0007	0.0013	0.0029	0.0054	0.0061	0.0075
Castilla.La.Mancha	0.0005	0.0010	0.0018	0.0033	0.0026	0.0030
Cataluña	0.0005	0.0011	0.0019	0.0031	0.0023	0.0023
Ceuta	0.0016	0.0025	0.0087	0.0198	0.0298	0.0404
Comunidad.Valenciana	0.0002	0.0009	0.0013	0.0027	0.0022	0.0029
Extremadura	0.0005	0.0012	0.0024	0.0047	0.0051	0.0065
Galicia	0.0007	0.0013	0.0026	0.0048	0.0050	0.0061
Islas.Baleares	0.0003	0.0010	0.0018	0.0036	0.0035	0.0046
La.Rioja	0.0010	0.0017	0.0042	0.0085	0.0109	0.0138
Madrid	0.0007	0.0013	0.0025	0.0044	0.0044	0.0052
Melilla	0.0008	0.0014	0.0031	0.0057	0.0064	0.0076
Murcia	0.0004	0.0011	0.0019	0.0035	0.0031	0.0037
Navarra	0.0008	0.0013	0.0034	0.0071	0.0089	0.0117
País.Vasco	0.0009	0.0014	0.0029	0.0049	0.0049	0.0052

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

Tabla Ratio Incr. Confirmados: Mod. No Paramétrico.

Last=30/05/2021

	Last	H1	H4	H8	H12	H15
España	0.0007	0.0013	0.0051	0.0109	0.0171	0.0229
Andalucía	0.0013	0.0019	0.0070	0.0149	0.0231	0.0306
Aragón	0.0008	0.0014	0.0054	0.0116	0.0181	0.0242
Asturias	0.0006	0.0012	0.0046	0.0099	0.0156	0.0211
Canarias	0.0013	0.0021	0.0077	0.0165	0.0253	0.0335
Cantabria	0.0009	0.0014	0.0052	0.0112	0.0176	0.0236
Castilla.y.León	0.0007	0.0012	0.0047	0.0101	0.0160	0.0215
Castilla.La.Mancha	0.0005	0.0012	0.0047	0.0101	0.0160	0.0214
Cataluña	0.0005	0.0013	0.0049	0.0104	0.0164	0.0220
Ceuta	0.0016	0.0012	0.0047	0.0103	0.0164	0.0223
Comunidad.Valenciana	0.0002	0.0009	0.0033	0.0073	0.0118	0.0162
Extremadura	0.0005	0.0011	0.0043	0.0093	0.0147	0.0198
Galicia	0.0007	0.0013	0.0050	0.0107	0.0169	0.0227
Islas.Baleares	0.0003	0.0010	0.0037	0.0081	0.0130	0.0177
La.Rioja	0.0010	0.0014	0.0054	0.0115	0.0181	0.0244
Madrid	0.0007	0.0014	0.0053	0.0112	0.0176	0.0235
Melilla	0.0008	0.0014	0.0053	0.0114	0.0178	0.0239
Murcia	0.0004	0.0011	0.0041	0.0088	0.0140	0.0190
Navarra	0.0008	0.0013	0.0048	0.0103	0.0163	0.0219
País.Vasco	0.0009	0.0016	0.0061	0.0131	0.0204	0.0271

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

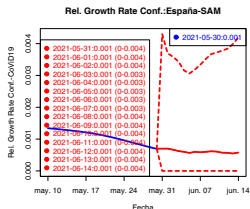
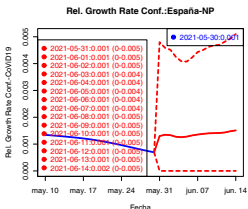
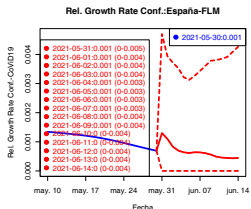
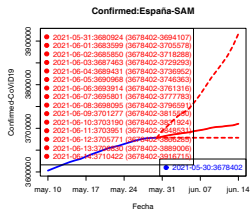
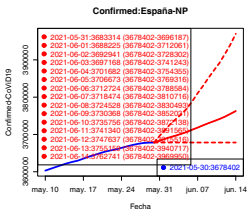
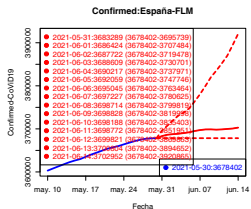
Tabla Ratio Incr. Confirmados: Mod. Aditivo.

Last=30/05/2021

	Last	H1	H4	H8	H12	H15
España	0.0007	0.0007	0.0025	0.0047	0.0069	0.0087
Andalucía	0.0013	0.0015	0.0049	0.0093	0.0131	0.0156
Aragón	0.0008	0.0006	0.0026	0.0049	0.0072	0.0094
Asturias	0.0006	0.0006	0.0021	0.0035	0.0054	0.0063
Canarias	0.0013	0.0012	0.0040	0.0071	0.0092	0.0103
Cantabria	0.0009	0.0010	0.0037	0.0078	0.0121	0.0163
Castilla.y.León	0.0007	0.0007	0.0027	0.0052	0.0080	0.0104
Castilla.La.Mancha	0.0005	0.0004	0.0014	0.0028	0.0040	0.0048
Cataluña	0.0005	0.0004	0.0015	0.0027	0.0037	0.0045
Ceuta	0.0016	0.0026	0.0099	0.0220	0.0368	0.0512
Comunidad.Valenciana	0.0002	0.0002	0.0012	0.0024	0.0051	0.0074
Extremadura	0.0005	0.0006	0.0022	0.0045	0.0073	0.0098
Galicia	0.0007	0.0007	0.0024	0.0046	0.0068	0.0090
Islas.Baleares	0.0003	0.0003	0.0016	0.0033	0.0060	0.0085
La.Rioja	0.0010	0.0013	0.0044	0.0084	0.0129	0.0165
Madrid	0.0007	0.0006	0.0021	0.0040	0.0057	0.0070
Melilla	0.0008	0.0008	0.0028	0.0053	0.0076	0.0093
Murcia	0.0004	0.0004	0.0017	0.0031	0.0053	0.0071
Navarra	0.0008	0.0008	0.0032	0.0069	0.0109	0.0146
País.Vasco	0.0009	0.0008	0.0026	0.0038	0.0044	0.0036

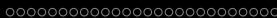
Cuadro: Previsión Ratio Incr. Confirmados: Mod. Aditivo - Horiz. (días).

Confirmados: España

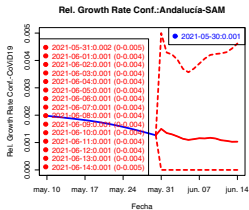
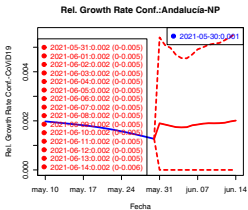
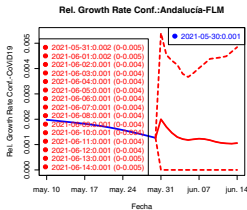
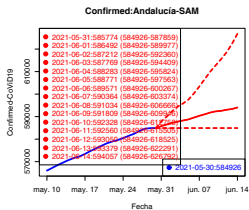
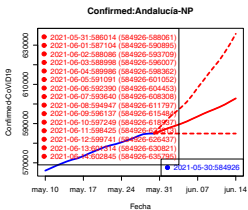
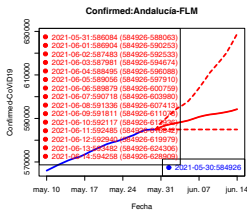


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados ▶ Fallecidos

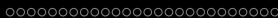
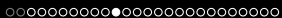


Confirmados: Andalucía



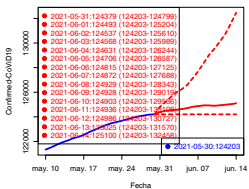
Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados ▶ Fallecidos

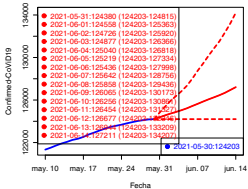


Confirmados: Aragón

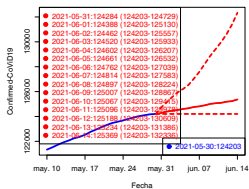
Confirmed:Aragón-FLM



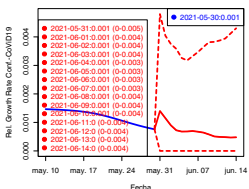
Confirmed:Aragón-NP



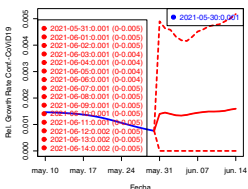
Confirmed:Aragón-SAM



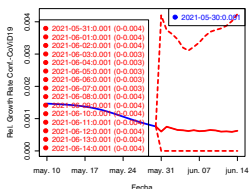
Rel. Growth Rate Conf.:Aragón-FLM



Rel. Growth Rate Conf.:Aragón-NP



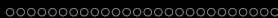
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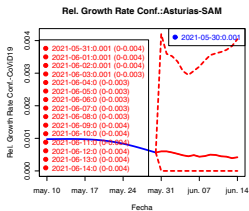
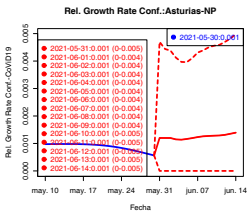
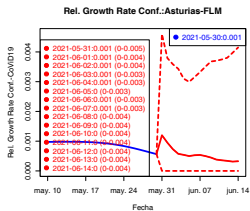
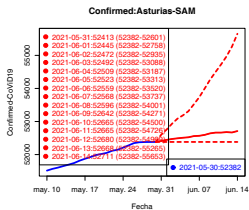
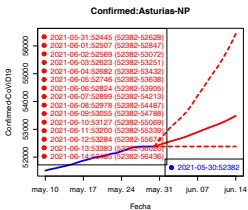
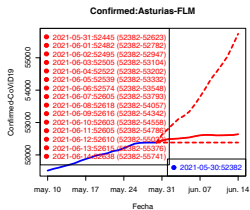
Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

← Confirmados

← Fallecidos



Confirmados: Asturias



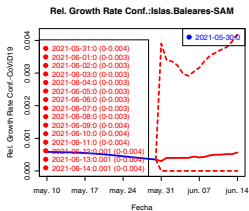
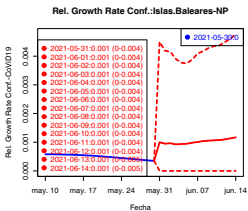
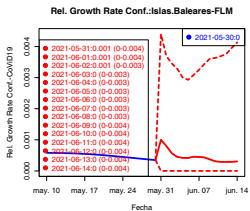
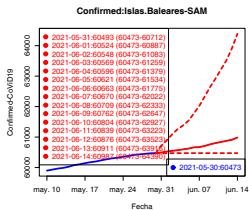
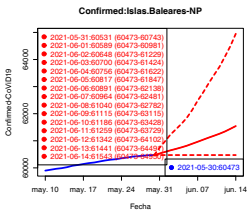
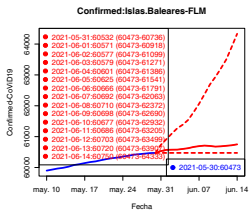
Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

← Confirmados

← Fallecidos



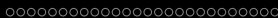
Confirmados: Islas Baleares



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

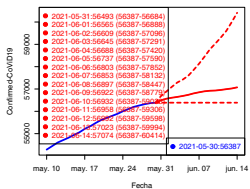
← Confirmados

← Fallecidos

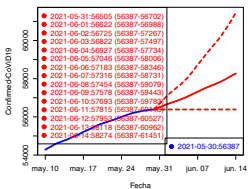


Confirmados: Canarias

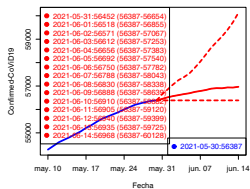
Confirmed:Canarias-FLM



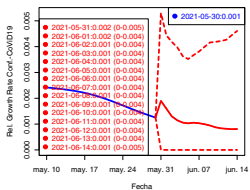
Confirmed:Canarias-NP



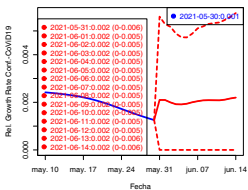
Confirmed:Canarias-SAM



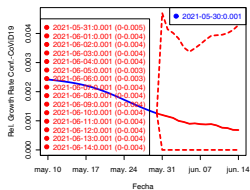
Rel. Growth Rate Conf.:Canarias-FLM



Rel. Growth Rate Conf.:Canarias-NP



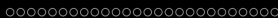
Rel. Growth Rate Conf.:Canarias-SAM



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

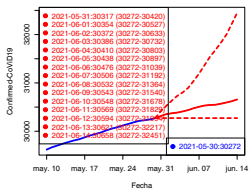
← Confirmados

← Fallecidos

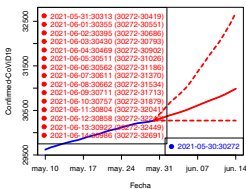


Confirmados: Cantabria

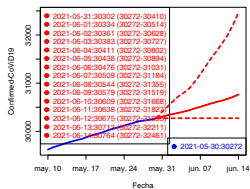
Confirmed:Cantabria-FLM



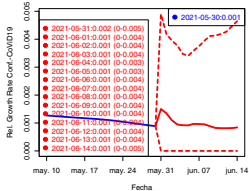
Confirmed:Cantabria-NP



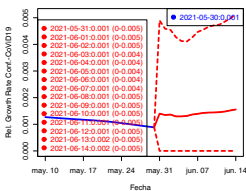
Confirmed:Cantabria-SAM



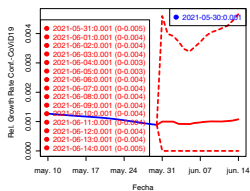
Rel. Growth Rate Conf.:Cantabria-FLM



Rel. Growth Rate Conf.:Cantabria-NP



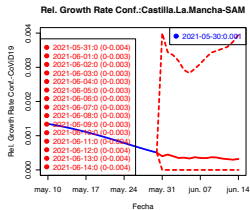
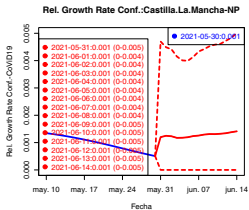
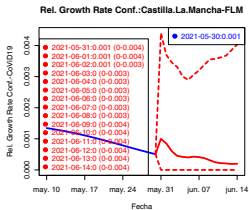
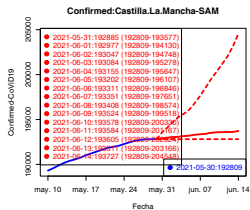
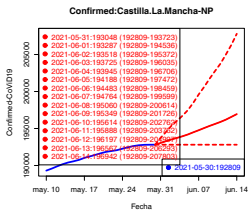
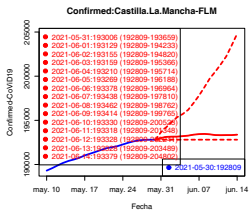
Rel. Growth Rate Conf.:Cantabria-SAM



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

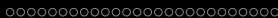
← Confirmados ← Fallecidos

Confirmados: Castilla-La Mancha

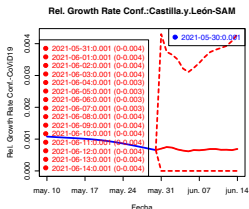
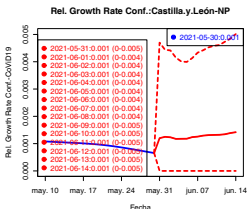
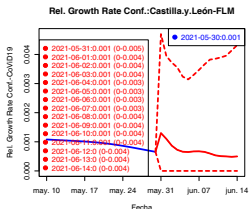
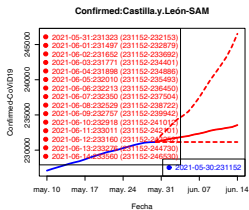
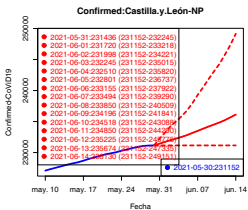
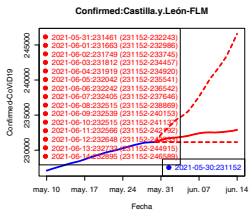


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados ▶ Fallecidos



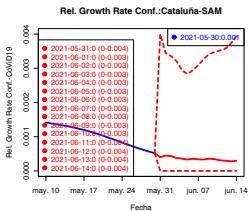
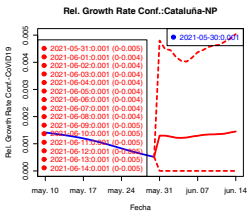
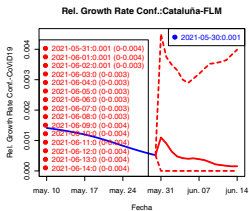
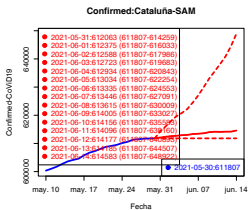
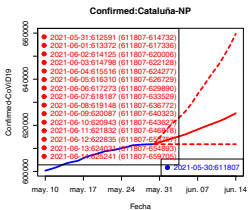
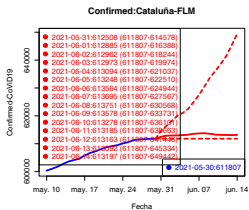
Confirmados: Castilla y León



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

◀ Confirmados ▶ Fallecidos

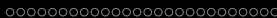
Confirmados: Cataluña



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

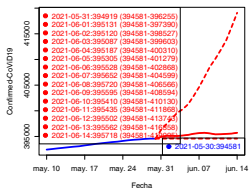
← Confirmados

← Fallecidos

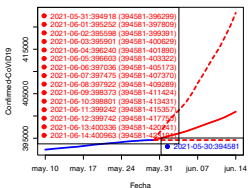


Confirmados: C. Valenciana

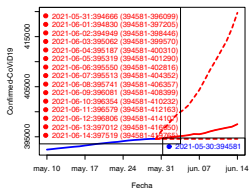
Confirmed:Comunidad.Valenciana-FLM



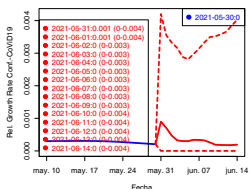
Confirmed:Comunidad.Valenciana-NP



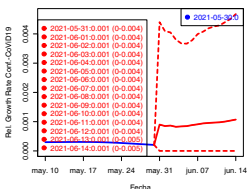
Confirmed:Comunidad.Valenciana-SAM



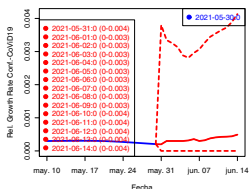
Rel. Growth Rate Conf.:Comunidad.Valenciana-FLM



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

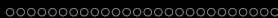


Rel. Growth Rate Conf.:Comunidad.Valenciana-SAM



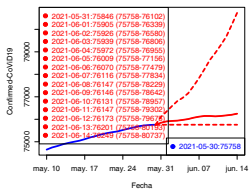
Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados ◀ Fallecidos

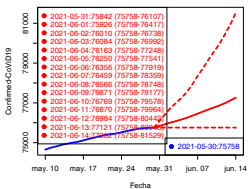


Confirmados: Extremadura

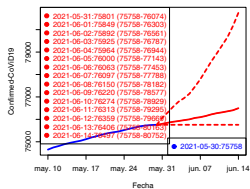
Confirmed:Extremadura-FLM



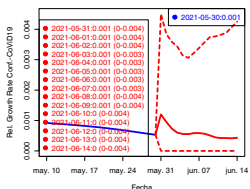
Confirmed:Extremadura-NP



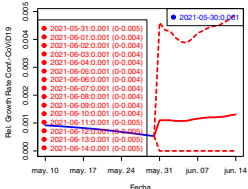
Confirmed:Extremadura-SAM



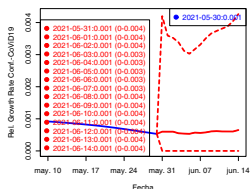
Rel. Growth Rate Conf.:Extremadura-FLM



Rel. Growth Rate Conf.:Extremadura-NP

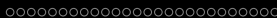


Rel. Growth Rate Conf.:Extremadura-SAM



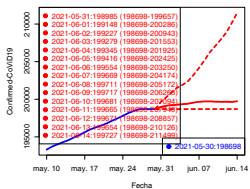
Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

← Confirmados ← Fallecidos

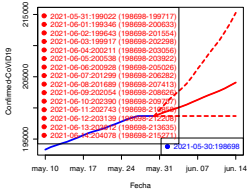


Confirmados: País Vasco

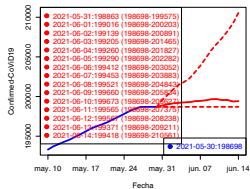
Confirmed:País.Vasco-FLM



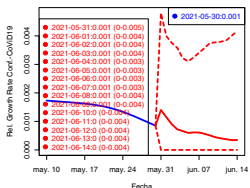
Confirmed:País.Vasco-NP



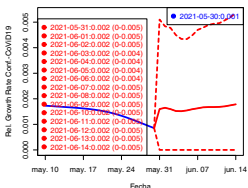
Confirmed:País.Vasco-SAM



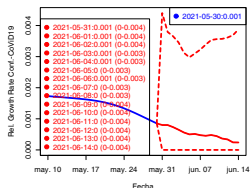
Rel. Growth Rate Conf.:País.Vasco-FLM



Rel. Growth Rate Conf.:País.Vasco-NP

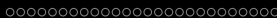
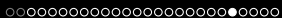


Rel. Growth Rate Conf.:País.Vasco-SAM



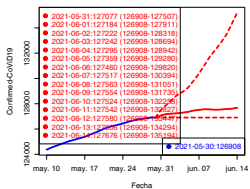
Los valores del Ratio de incremento de H2–H15 están rescalados a H1 para su comparación gráfica.

← Confirmados ← Fallecidos

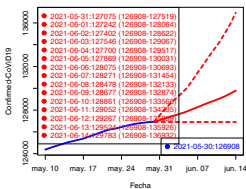


Confirmados: Galicia

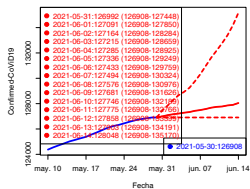
Confirmed:Galicia-FLM



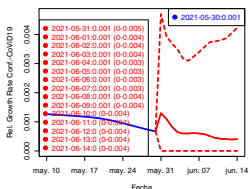
Confirmed:Galicia-NP



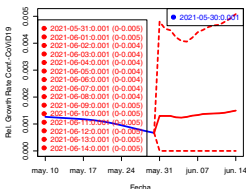
Confirmed:Galicia-SAM



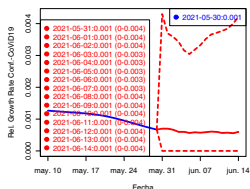
Rel. Growth Rate Conf.:Galicia-FLM



Rel. Growth Rate Conf.:Galicia-NP

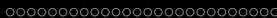
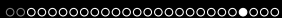


Rel. Growth Rate Conf.:Galicia-SAM



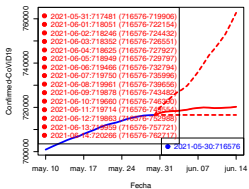
Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

← Confirmados ← Fallecidos

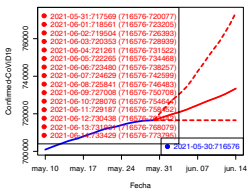


Confirmados: Madrid

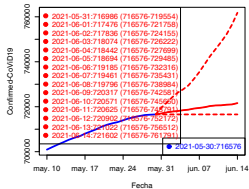
Confirmed:Madrid-FLM



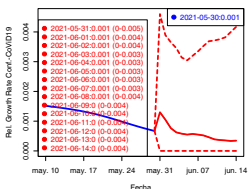
Confirmed:Madrid-NP



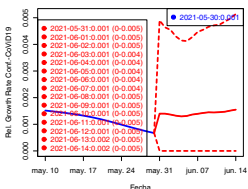
Confirmed:Madrid-SAM



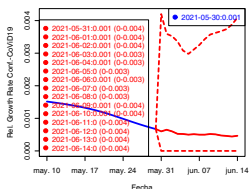
Rel. Growth Rate Conf.:Madrid-FLM



Rel. Growth Rate Conf.:Madrid-NP



Rel. Growth Rate Conf.:Madrid-SAM

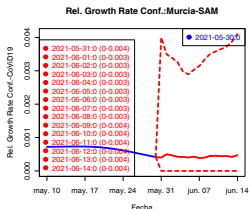
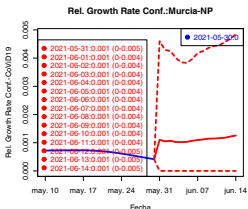
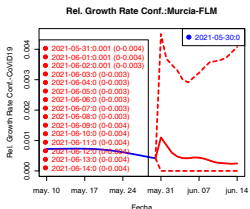
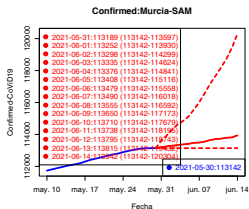
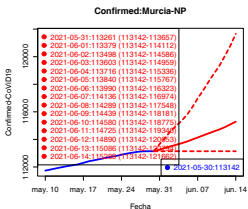
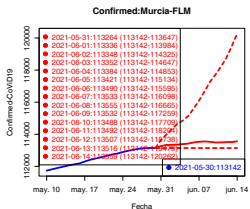


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

← Confirmados

← Fallecidos

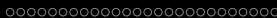
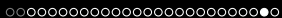
Confirmados: Murcia



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

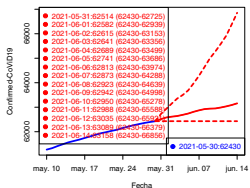
← Confirmados

← Fallecidos

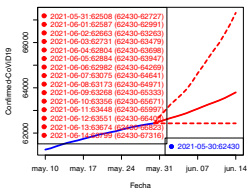


Confirmados: Navarra

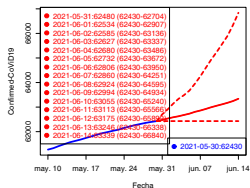
Confirmed:Navarra-FLM



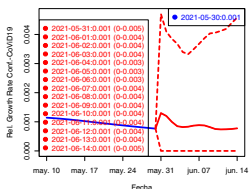
Confirmed:Navarra-NP



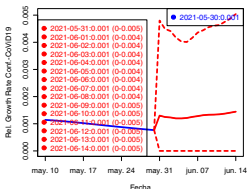
Confirmed:Navarra-SAM



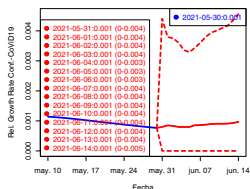
Rel. Growth Rate Conf.:Navarra-FLM



Rel. Growth Rate Conf.:Navarra-NP



Rel. Growth Rate Conf.:Navarra-SAM

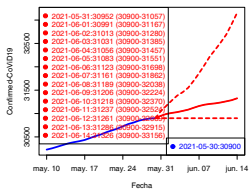


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

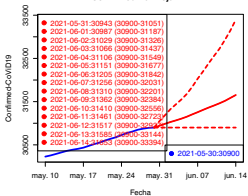
◀ Confirmados ◀ Fallecidos

Confirmados: La Rioja

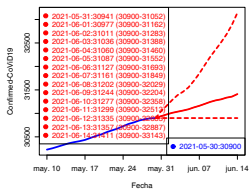
Confirmed:La.Rioja-FLM



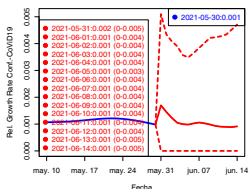
Confirmed:La.Rioja-NP



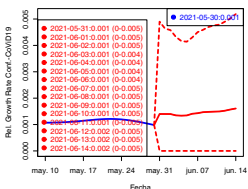
Confirmed:La.Rioja-SAM



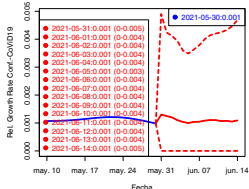
Rel. Growth Rate Conf.:La.Rioja-FLM



Rel. Growth Rate Conf.:La.Rioja-NP



Rel. Growth Rate Conf.:La.Rioja-SAM



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

← Confirmados

← Fallecidos

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- Predicciones

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Modelos para fallecidos por CoViD-19

Último dato: **30/05/2021** 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

Horiz	$10^2\sigma_R^2$			$10^2\sigma_R^2(rob.)$			r^2		
	FLM	NP	SAM	FLM	NP	SAM	FLM	NP	SAM
H1	0.004	0.004	0.004	0.001	0.001	0.001	0.573	0.632	0.578
H4	0.017	0.016	0.015	0.008	0.008	0.007	0.824	0.836	0.836
H8	0.057	0.062	0.053	0.032	0.038	0.027	0.861	0.853	0.872
H12	0.124	0.138	0.11	0.084	0.095	0.067	0.865	0.854	0.88
H15	0.198	0.229	0.169	0.148	0.181	0.12	0.872	0.856	0.891

Tabla Previsión Fallecidos: Mod. Lineal.

Last=30/05/2021

	Last	H1	H4	H8	H12	H15
España	79559	79573	79559	79559	79559	79559
Andalucía	9809	9811	9810	9809	9809	9809
Aragón	3486	3486	3486	3486	3486	3486
Asturias	1967	1967	1967	1967	1967	1967
Canarias	759	759	759	759	759	759
Cantabria	565	565	566	567	567	567
Castilla.y.León	6827	6828	6827	6827	6827	6827
Castilla.La.Mancha	5890	5891	5890	5890	5890	5890
Cataluña	14364	14365	14364	14364	14364	14364
Ceuta	115	115	116	116	117	118
Comunidad.Valenciana	7359	7360	7359	7359	7359	7359
Extremadura	1785	1786	1785	1786	1785	1785
Galicia	2401	2401	2401	2401	2401	2401
Islas.Baleares	839	839	839	839	839	839
La.Rioja	771	771	771	771	771	771
Madrid	15322	15326	15322	15322	15322	15322
Melilla	97	97	97	97	97	97
Murcia	1600	1601	1600	1600	1600	1600
Navarra	1174	1175	1175	1177	1176	1176
País.Vasco	4429	4429	4429	4429	4429	4429

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

Tabla Previsión Fallecidos: Mod. No Paramétrico.

Last=30/05/2021

	Last	H1	H4	H8	H12	H15
España	79559	79633	79884	80262	80614	80949
Andalucía	9809	9819	9851	9900	9946	9990
Aragón	3486	3490	3501	3520	3536	3553
Asturias	1967	1969	1975	1984	1993	2001
Canarias	759	760	763	768	772	776
Cantabria	565	566	567	570	573	575
Castilla.y.León	6827	6833	6854	6886	6915	6943
Castilla.La.Mancha	5890	5895	5913	5940	5964	5988
Cataluña	14364	14376	14418	14481	14540	14595
Ceuta	115	115	116	116	117	118
Comunidad.Valenciana	7359	7365	7386	7418	7447	7474
Extremadura	1785	1787	1792	1800	1807	1814
Galicia	2401	2403	2411	2423	2434	2445
Islas.Baleares	839	840	842	846	849	853
La.Rioja	771	772	774	778	782	785
Madrid	15322	15337	15387	15463	15534	15601
Melilla	97	97	97	98	99	99
Murcia	1600	1601	1606	1614	1621	1627
Navarra	1174	1175	1179	1184	1190	1194
País.Vasco	4429	4434	4450	4475	4499	4521

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

Tabla Previsión Fallecidos: Mod. Aditivo.

Last=30/05/2021

	Last	H1	H4	H8	H12	H15
España	79559	79559	79616	79567	79559	79559
Andalucía	9809	9809	9819	9809	9809	9809
Aragón	3486	3486	3489	3488	3486	3486
Asturias	1967	1967	1969	1970	1970	1970
Canarias	759	759	760	761	761	761
Cantabria	565	565	566	567	568	569
Castilla.y.León	6827	6827	6832	6829	6831	6827
Castilla.La.Mancha	5890	5890	5891	5890	5890	5890
Cataluña	14364	14364	14364	14364	14364	14364
Ceuta	115	115	115	116	117	118
Comunidad.Valenciana	7359	7359	7361	7359	7362	7359
Extremadura	1785	1785	1786	1786	1787	1785
Galicia	2401	2401	2404	2405	2405	2405
Islas.Baleares	839	839	839	839	839	839
La.Rioja	771	771	772	771	772	771
Madrid	15322	15322	15336	15331	15326	15322
Melilla	97	97	97	97	97	97
Murcia	1600	1600	1602	1602	1603	1602
Navarra	1174	1174	1175	1174	1176	1175
País.Vasco	4429	4429	4436	4437	4435	4437

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

Tabla Ratio Incr. Fallecidos: Mod. Lineal.

Last=30/05/2021

	Last	H1	H4	H8	H12	H15
España	0.0002	0.0002	0.0000	0.0000	0.0000	0.0000
Andalucía	0.0002	0.0002	0.0001	0.0000	0.0000	0.0000
Aragón	0.0002	0.0001	0.0000	0.0000	0.0000	0.0000
Asturias	0.0001	0.0001	0.0000	0.0000	0.0000	0.0000
Canarias	0.0006	0.0003	0.0005	0.0004	0.0000	0.0000
Cantabria	0.0005	0.0007	0.0014	0.0032	0.0032	0.0029
Castilla.y.León	0.0001	0.0002	0.0000	0.0000	0.0000	0.0000
Castilla.La.Mancha	0.0001	0.0001	0.0000	0.0000	0.0000	0.0000
Cataluña	0.0001	0.0001	0.0000	0.0000	0.0000	0.0000
Ceuta	0.0011	0.0013	0.0045	0.0117	0.0160	0.0226
Comunidad.Valenciana	0.0000	0.0001	0.0000	0.0000	0.0000	0.0000
Extremadura	0.0002	0.0003	0.0002	0.0004	0.0000	0.0000
Galicia	0.0002	0.0002	0.0000	0.0000	0.0000	0.0000
Islas.Baleares	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
La.Rioja	0.0002	0.0002	0.0000	0.0000	0.0000	0.0000
Madrid	0.0003	0.0003	0.0000	0.0000	0.0000	0.0000
Melilla	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000
Murcia	0.0003	0.0004	0.0001	0.0000	0.0000	0.0000
Navarra	0.0004	0.0005	0.0011	0.0025	0.0021	0.0018
País.Vasco	0.0002	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=30/05/2021

	Last	H1	H4	H8	H12	H15
España	0.0002	0.0009	0.0041	0.0088	0.0133	0.0175
Andalucía	0.0002	0.0010	0.0043	0.0093	0.0140	0.0185
Aragón	0.0002	0.0010	0.0044	0.0096	0.0145	0.0191
Asturias	0.0001	0.0009	0.0040	0.0088	0.0131	0.0173
Canarias	0.0006	0.0013	0.0053	0.0115	0.0173	0.0230
Cantabria	0.0005	0.0010	0.0042	0.0092	0.0138	0.0183
Castilla.y.León	0.0001	0.0009	0.0040	0.0086	0.0129	0.0170
Castilla.La.Mancha	0.0001	0.0009	0.0039	0.0084	0.0126	0.0166
Cataluña	0.0001	0.0008	0.0038	0.0082	0.0122	0.0161
Ceuta	0.0011	0.0014	0.0055	0.0121	0.0183	0.0243
Comunidad.Valenciana	0.0000	0.0008	0.0037	0.0080	0.0119	0.0157
Extremadura	0.0002	0.0009	0.0038	0.0083	0.0124	0.0164
Galicia	0.0002	0.0010	0.0043	0.0092	0.0139	0.0183
Islas.Baleares	0.0000	0.0009	0.0038	0.0083	0.0124	0.0163
La.Rioja	0.0002	0.0010	0.0042	0.0091	0.0137	0.0181
Madrid	0.0003	0.0010	0.0042	0.0092	0.0138	0.0182
Melilla	0.0001	0.0012	0.0050	0.0108	0.0163	0.0215
Murcia	0.0003	0.0009	0.0040	0.0086	0.0129	0.0170
Navarra	0.0004	0.0009	0.0041	0.0088	0.0132	0.0174
País.Vasco	0.0002	0.0011	0.0048	0.0104	0.0157	0.0208

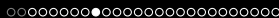
Cuadro: Previsión Ratio Incr. Fallecidos: Mod. No Paramétrico - Horiz. (días).

Tabla Ratio Incr. Fallecidos: Mod. Aditivo.

Last=30/05/2021

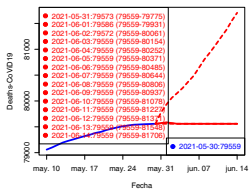
	Last	H1	H4	H8	H12	H15
España	0.0002	0.0000	0.0007	0.0001	0.0000	0.0000
Andalucía	0.0002	0.0000	0.0010	0.0000	0.0000	0.0000
Aragón	0.0002	0.0000	0.0008	0.0005	0.0001	0.0000
Asturias	0.0001	0.0000	0.0011	0.0014	0.0013	0.0014
Canarias	0.0006	0.0002	0.0018	0.0027	0.0025	0.0027
Cantabria	0.0005	0.0005	0.0019	0.0038	0.0055	0.0063
Castilla.y.León	0.0001	0.0000	0.0008	0.0004	0.0005	0.0000
Castilla.La.Mancha	0.0001	0.0000	0.0001	0.0000	0.0000	0.0000
Cataluña	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000
Ceuta	0.0011	0.0010	0.0041	0.0094	0.0170	0.0238
Comunidad.Valenciana	0.0000	0.0000	0.0003	0.0000	0.0004	0.0000
Extremadura	0.0002	0.0000	0.0006	0.0003	0.0011	0.0000
Galicia	0.0002	0.0000	0.0012	0.0015	0.0017	0.0015
Islas.Baleares	0.0000	0.0000	0.0003	0.0001	0.0002	0.0001
La.Rioja	0.0002	0.0000	0.0015	0.0005	0.0012	0.0005
Madrid	0.0003	0.0000	0.0009	0.0006	0.0002	0.0000
Melilla	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000
Murcia	0.0003	0.0001	0.0010	0.0013	0.0020	0.0015
Navarra	0.0004	0.0002	0.0009	0.0003	0.0019	0.0005
País.Vasco	0.0002	0.0000	0.0016	0.0018	0.0014	0.0017

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

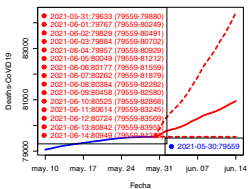


Fallecidos: España

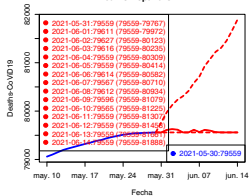
Deaths:España-FLM



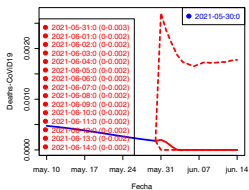
Deaths:España-NP



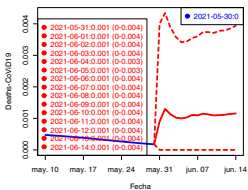
Deaths:España-SAM



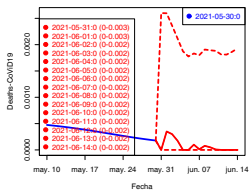
Deaths:España-FLM



Deaths:España-NP



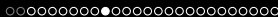
Deaths:España-SAM



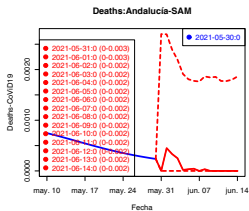
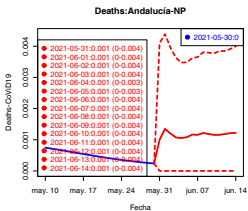
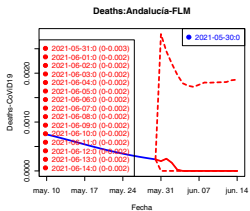
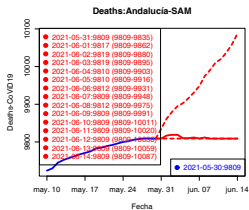
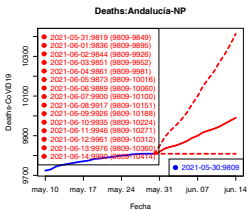
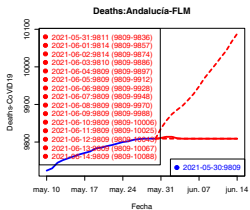
Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

← Confirmados

← Fallecidos



Fallecidos: Andalucía



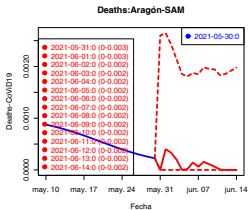
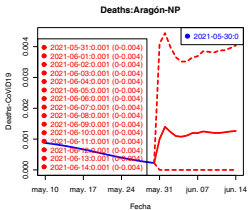
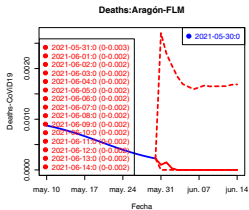
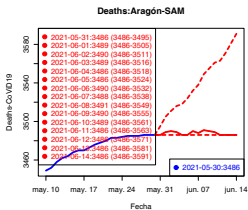
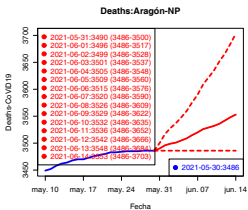
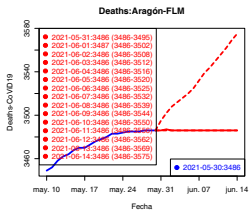
Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos



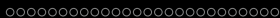
Fallecidos: Aragón



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

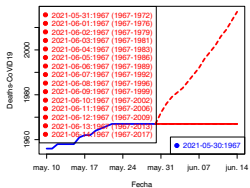
◀ Confirmados

◀ Fallecidos

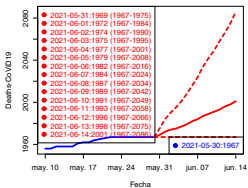


Fallecidos: Asturias

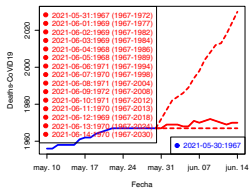
Deaths: Asturias-FLM



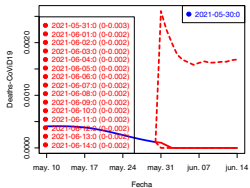
Deaths: Asturias-NP



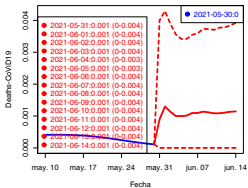
Deaths: Asturias-SAM



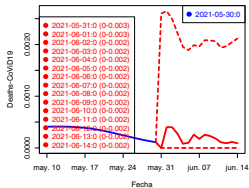
Deaths: Asturias-FLM



Deaths: Asturias-NP



Deaths: Asturias-SAM



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

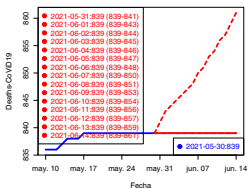
◀ Confirmados

◀ Fallecidos

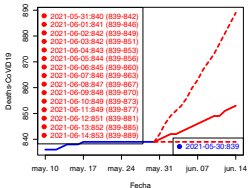


Fallecidos: Islas Baleares

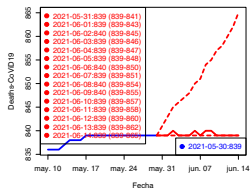
Deaths: Islas Baleares-FLM



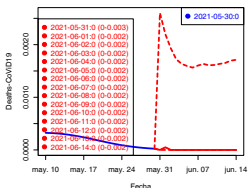
Deaths: Islas Baleares-NP



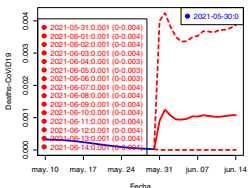
Deaths: Islas Baleares-SAM



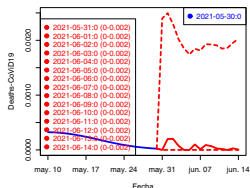
Deaths: Islas Baleares-FLM



Deaths: Islas Baleares-NP



Deaths: Islas Baleares-SAM



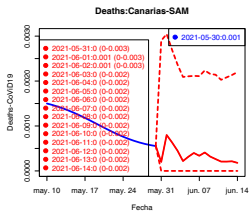
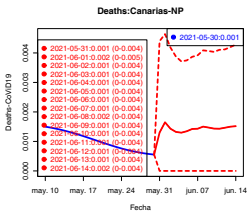
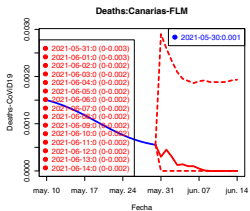
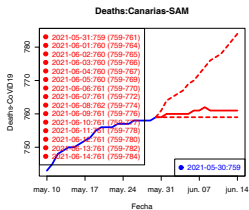
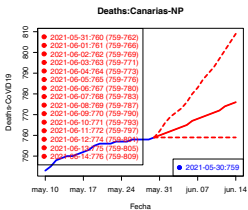
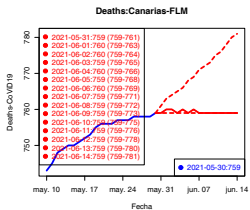
Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

← Confirmados

← Fallecidos



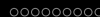
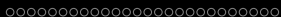
Fallecidos: Canarias



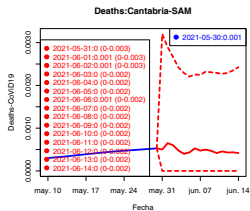
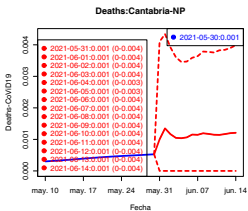
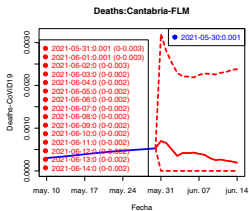
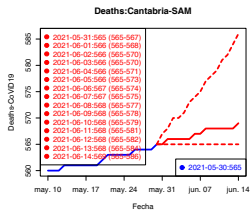
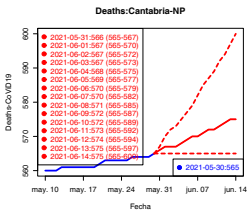
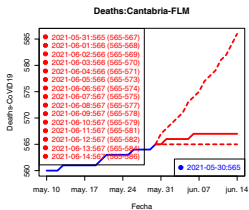
Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

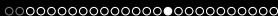
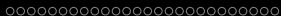


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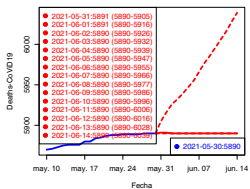
Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados ▶ Fallecidos

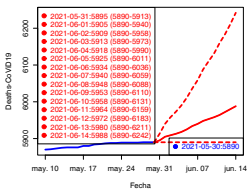


Fallecidos: Castilla-La Mancha

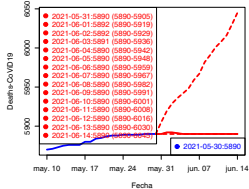
Deaths:Castilla.La.Mancha-FLM



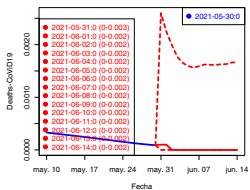
Deaths:Castilla.La.Mancha-NP



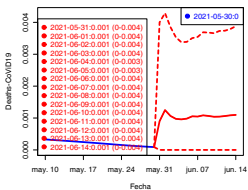
Deaths:Castilla.La.Mancha-SAM



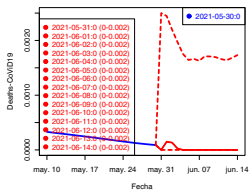
Deaths:Castilla.La.Mancha-FLM



Deaths:Castilla.La.Mancha-NP



Deaths:Castilla.La.Mancha-SAM

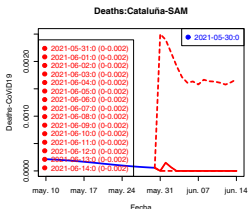
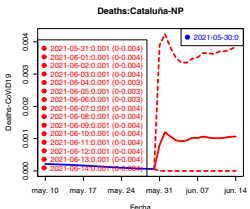
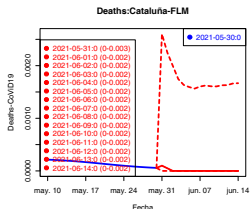
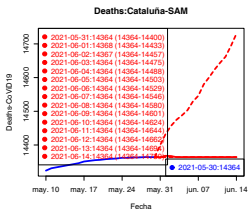
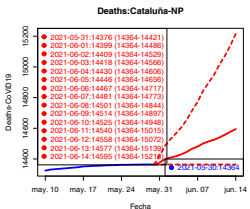
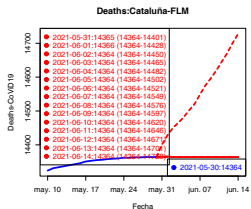


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

← Confirmados

← Fallecidos

Fallecidos: Cataluña



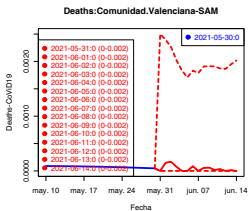
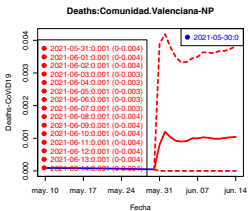
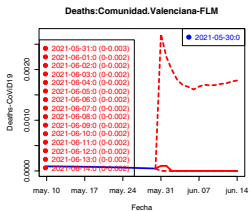
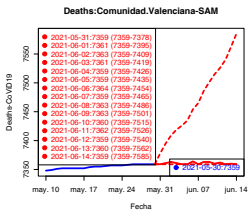
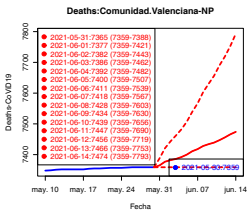
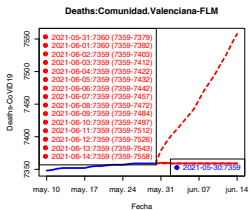
Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

← Confirmados

← Fallecidos



Fallecidos: C. Valenciana



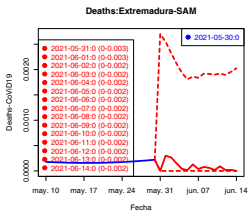
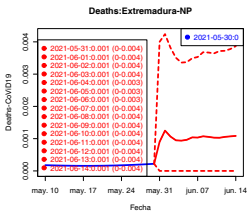
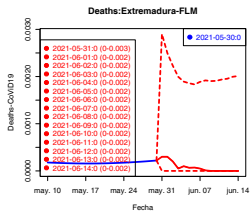
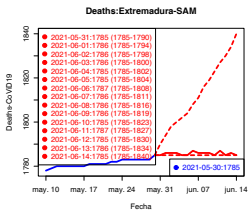
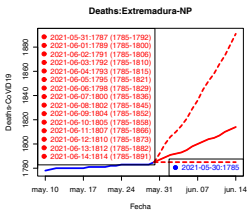
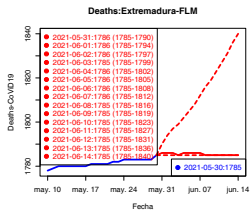
Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos



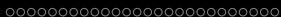
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Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

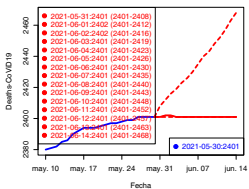
◀ Confirmados

◀ Fallecidos

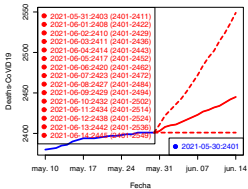


Fallecidos: Galicia

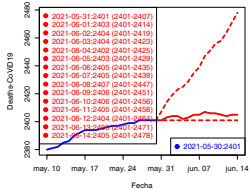
Deaths:Galicia-FLM



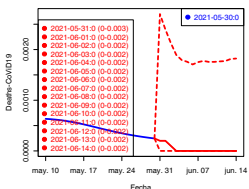
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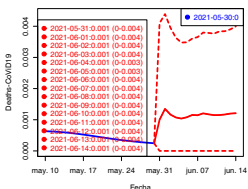
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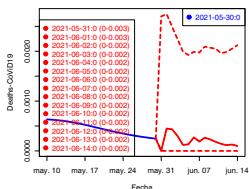
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Deaths:Galicia-NP



Deaths:Galicia-SAM



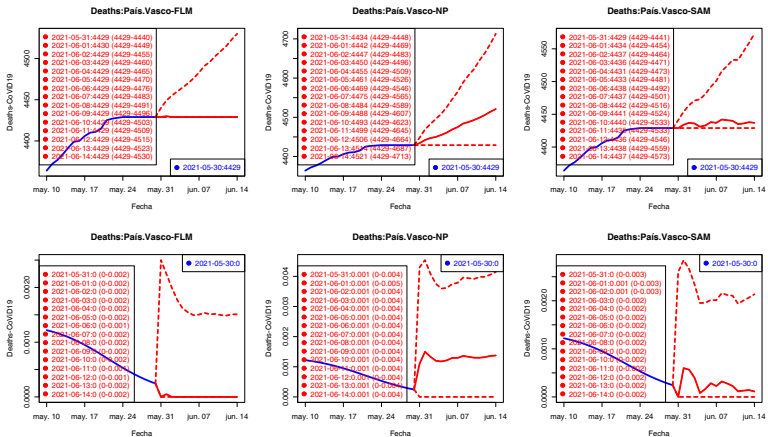
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◀ Confirmados

◀ Fallecidos



Fallecidos: País Vasco



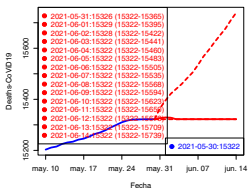
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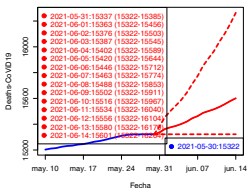
◀ Fallecidos

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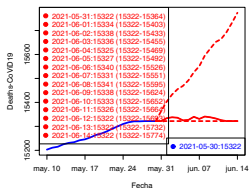
Deaths:Madrid-FLM



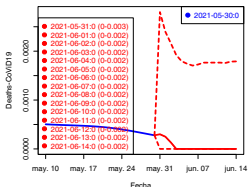
Deaths:Madrid-NP



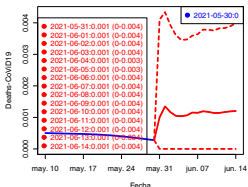
Deaths:Madrid-SAM



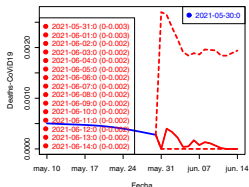
Deaths:Madrid-FLM



Deaths:Madrid-NP



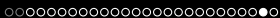
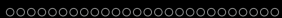
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Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

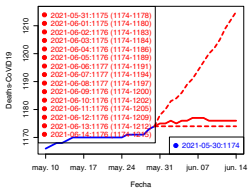
← Confirmados

← Fallecidos

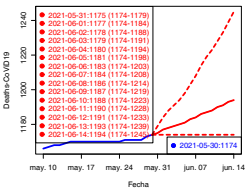


Fallecidos: Navarra

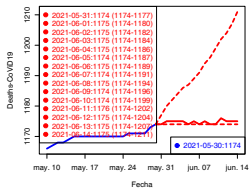
Deaths:Navarra-FLM



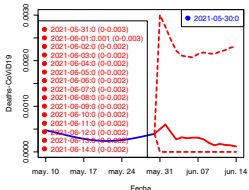
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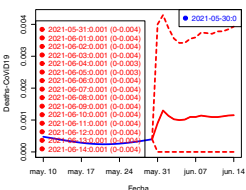
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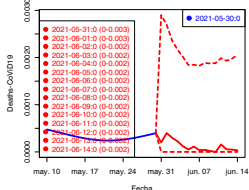
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Deaths:Navarra-SAM



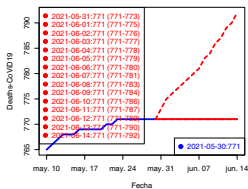
Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

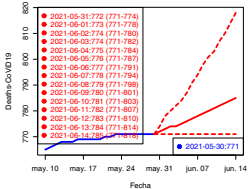
◀ Fallecidos

Fallecidos: La Rioja

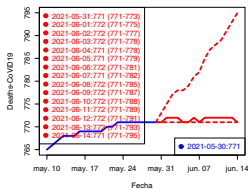
Deaths:La.Rioja-FLM



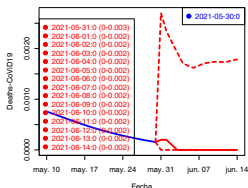
Deaths:La.Rioja-NP



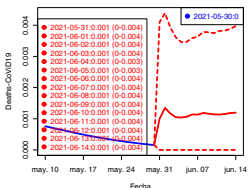
Deaths:La.Rioja-SAM



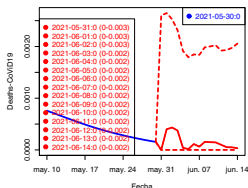
Deaths:La.Rioja-FLM



Deaths:La.Rioja-NP



Deaths:La.Rioja-SAM



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

← Confirmados

← Fallecidos

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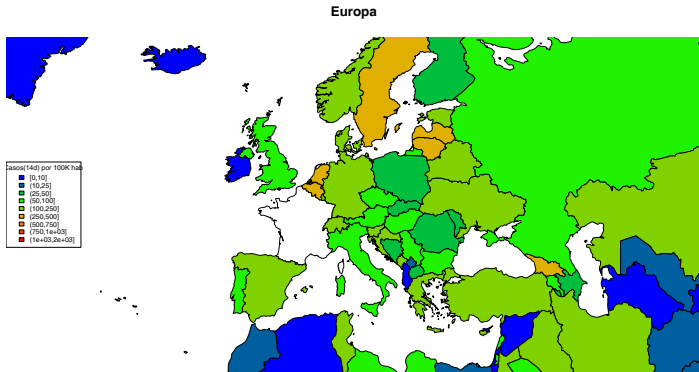
- Predicciones

2 Fallecidos

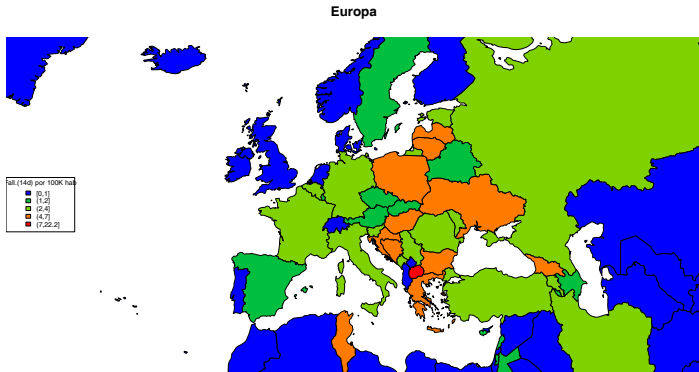
- Predicciones Fallecidos

3 Panorama internacional

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

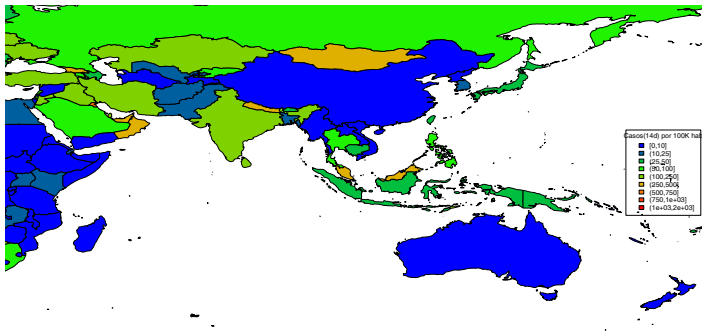


Europa: Fallecidos (14d) por 100K hab.



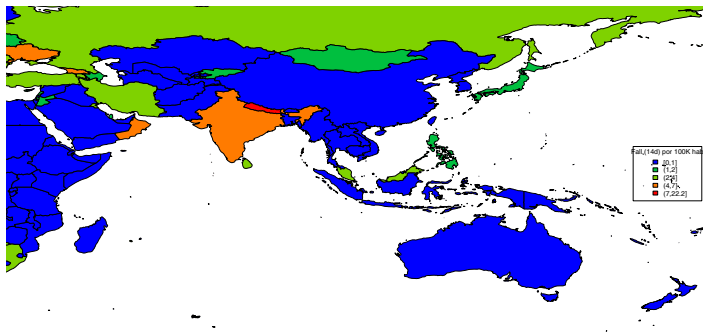
Asia y Oceanía: Incidencia acumulada (14d) por 100K hab.

Asia y Oceanía



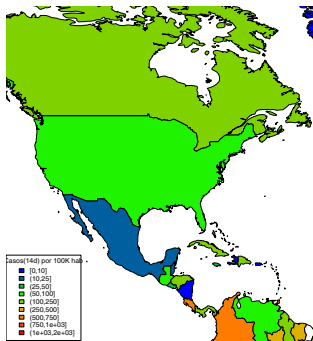
Asia y Oceanía: Fallecidos (14d) por 100K hab.

Asia y Oceanía

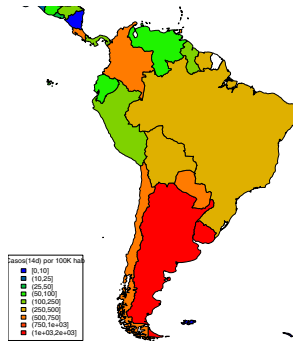


América: Incidencia acumulada (14d) por 100K hab.

América del Norte

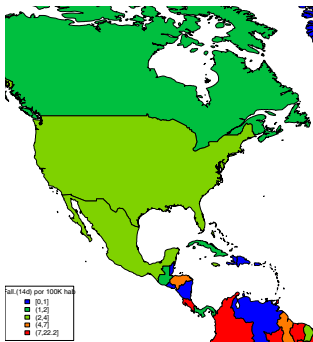


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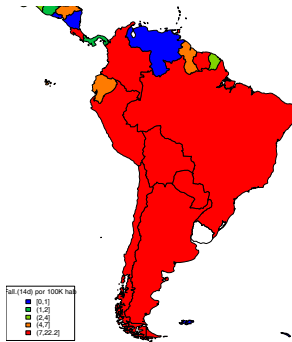


América: Fallecidos (14d) por 100K hab.

América del Norte

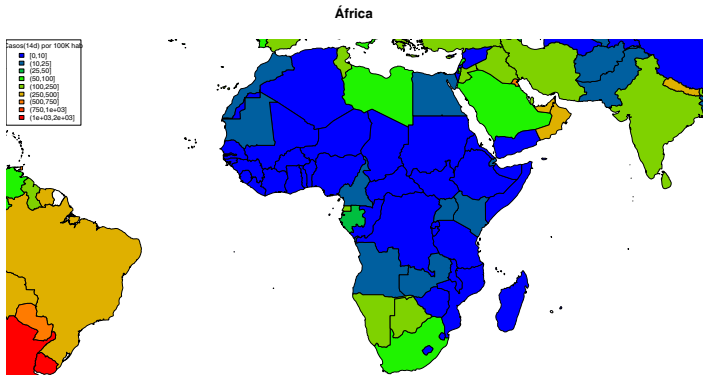


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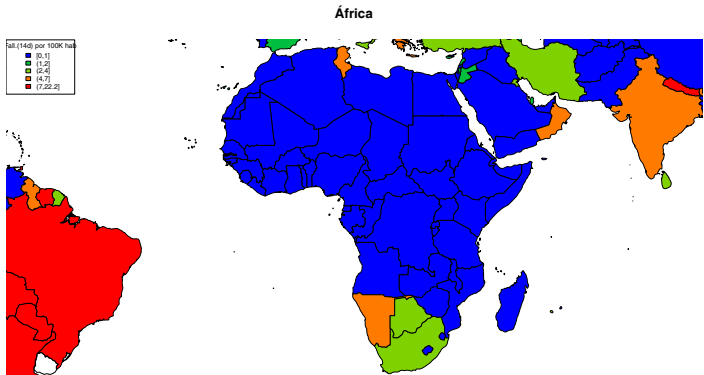




África: Incidencia acumulada (14d) por 100K hab.



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.