

Predicciones sobre CoViD-19

Manuel Febrero-Bande

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

April 3, 2020



DEPARTAMENTO DE ESTATÍSTICA,
ANÁLISE MATEMÁTICA E OPTIMIZACIÓN



- Predicciones

- Predicciones Fallecidos

Datos

Número de datos funcionales: 1553

Países/Regiones distintos incorporados: 102

Predicciones:

▶ España

► Andalucía

► Aragón

► Asturias

► I. Balears

▶ **Canarias**

► **Cantabria**

▶ Catalunya

► Castilla-La Mancha

▶ Castilla y León

► C. Valenciana

► Extremadura

▶ País Vasco

▶ Galicia

► Madrid

► Murcia

► Navarra

► La Rioja

► Mod Lineal

▶ Mod NP

► Mod Aditivo

Horiz	Medida	FLM	NP	SAM
H1	σ_R^2	0.007	0.008	0.007
H1	$\sigma_R^2(rob.)$	0.004	0.005	0.004
H1	r^2	0.455	0.408	0.483
H2	σ_R^2	0.018	0.021	0.016
H2	$\sigma_R^2(rob.)$	0.017	0.018	0.014
H2	r^2	0.614	0.542	0.655
H3	σ_R^2	0.037	0.047	0.033
H3	$\sigma_R^2(rob.)$	0.039	0.048	0.033
H3	r^2	0.675	0.587	0.711

Último dato: 2020-04-02 21:00 que se publica 2020-04-03 12:00.

Tabla Previsión Confirmados: Mod. Lineal.

	Last	H1	H2	H3	H4	H5
España	117710	124455	128353	131094	132394	132457
Andalucía	7374	7929	8443	8993	9574	10247
Aragón	2889	3150	3421	3689	3966	4282
Asturias	1433	1503	1563	1615	1673	1725
Canarias	1490	1577	1652	1717	1782	1853
Cantabria	1321	1386	1399	1378	1351	1321
Castilla.y.León	7875	8468	9009	9522	10065	10624
Castilla.La.Mancha	8523	9287	10049	10793	11627	12432
Cataluña	23460	24966	26215	27549	28844	30399
Ceuta	62	75	82	91	103	113
Comunidad.Valenciana	6624	7085	7545	7982	8415	8922
Extremadura	1893	2001	2097	2183	2253	2355
Galicia	5219	5688	6199	6691	7205	7763
Islas.Baleares	1257	1322	1393	1452	1506	1568
La.Rioja	2224	2391	2595	2801	3017	3262
Madrid	34188	36549	38768	41203	43726	46591
Melilla	70	75	80	87	94	103
Murcia	1145	1213	1276	1332	1385	1449
Navarra	2836	3030	3229	3432	3647	3890
País.Vasco	7827	8342	8836	9316	9815	10353

Table: Previsión Confirmados: Mod. Lineal - Horizonte 1 – 5 días.

Tabla Previsión Confirmados: Mod. No Paramétrico.

	Last	H1	H2	H3	H4	H5
España	117710	126951	136555	146451	157077	168393
Andalucía	7374	7982	8612	9262	9963	10703
Aragón	2889	3197	3513	3843	4201	4571
Asturias	1433	1507	1585	1663	1747	1837
Canarias	1490	1597	1709	1821	1942	2069
Cantabria	1321	1443	1564	1686	1816	1946
Castilla.y.León	7875	8592	9325	10077	10891	11728
Castilla.La.Mancha	8523	9382	10258	11160	12145	13143
Cataluña	23460	25586	27763	29993	32406	34900
Ceuta	62	72	82	94	107	120
Comunidad.Valenciana	6624	7163	7722	8296	8914	9566
Extremadura	1893	2058	2227	2401	2586	2782
Galicia	5219	5790	6372	6977	7638	8311
Islas.Baleares	1257	1355	1455	1556	1664	1777
La.Rioja	2224	2355	2494	2639	2795	2967
Madrid	34188	36295	38524	40840	43318	46056
Melilla	70	72	75	78	81	84
Murcia	1145	1232	1322	1414	1513	1617
Navarra	2836	3029	3231	3438	3660	3900
País.Vasco	7827	8396	8987	9591	10238	10930

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

Tabla Previsión Confirmados: Mod. Aditivo.

	Last	H1	H2	H3	H4	H5
España	117710	126658	137015	146485	159627	171808
Andalucía	7374	7977	8711	9314	10164	11040
Aragón	2889	3197	3522	3877	4214	4495
Asturias	1433	1507	1572	1620	1683	1712
Canarias	1490	1584	1671	1748	1857	1934
Cantabria	1321	1369	1364	1345	1370	1383
Castilla.y.León	7875	8551	9278	9957	10776	11336
Castilla.La.Mancha	8523	9446	10304	11215	11937	12400
Cataluña	23460	25344	27173	28653	30696	33499
Ceuta	62	76	88	96	116	138
Comunidad.Valenciana	6624	7151	7715	8266	8925	9467
Extremadura	1893	2028	2205	2435	2553	2671
Galicia	5219	5775	6282	6865	7293	7652
Islas.Baleares	1257	1326	1402	1488	1553	1582
La.Rioja	2224	2388	2534	2669	2819	3019
Madrid	34188	36599	39566	41406	44594	48862
Melilla	70	76	82	88	95	103
Murcia	1145	1218	1312	1412	1532	1668
Navarra	2836	3037	3247	3428	3694	3979
País.Vasco	7827	8360	8942	9508	10262	10946

Table: Previsión número de casos confirmados: Mod. Aditivo - Horizonte 1 – 5 días.

Tabla Ratio Incr. Confirmados: Mod. Lineal.

	Last	H1	H2	H3	H4	H5
España	0.080	0.057	0.090	0.114	0.125	0.125
Andalucía	0.083	0.075	0.145	0.220	0.298	0.390
Aragón	0.086	0.090	0.184	0.277	0.373	0.482
Asturias	0.052	0.049	0.091	0.127	0.167	0.203
Canarias	0.054	0.058	0.108	0.152	0.196	0.243
Cantabria	0.047	0.049	0.059	0.043	0.022	0.000
Castilla.y.León	0.080	0.075	0.144	0.209	0.278	0.349
Castilla.La.Mancha	0.101	0.090	0.179	0.266	0.364	0.459
Cataluña	0.087	0.064	0.117	0.174	0.230	0.296
Ceuta	0.213	0.214	0.320	0.457	0.652	0.813
Comunidad.Valenciana	0.066	0.070	0.139	0.205	0.270	0.347
Extremadura	0.053	0.057	0.108	0.153	0.190	0.244
Galicia	0.093	0.090	0.188	0.282	0.380	0.487
Islas.Baleares	0.057	0.052	0.108	0.155	0.198	0.247
La.Rioja	0.068	0.075	0.167	0.259	0.356	0.467
Madrid	0.081	0.069	0.134	0.205	0.279	0.363
Melilla	0.082	0.069	0.143	0.235	0.339	0.461
Murcia	0.054	0.059	0.114	0.163	0.209	0.265
Navarra	0.071	0.068	0.138	0.210	0.286	0.371
País.Vasco	0.070	0.066	0.129	0.190	0.254	0.323

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

Tabla Ratio Incr. Confirmados: Mod. No Paramétrico.

	Last	H1	H2	H3	H4	H5
España	0.080	0.079	0.160	0.244	0.334	0.431
Andalucía	0.083	0.082	0.168	0.256	0.351	0.451
Aragón	0.086	0.106	0.216	0.330	0.454	0.582
Asturias	0.052	0.052	0.106	0.161	0.219	0.282
Canarias	0.054	0.072	0.147	0.222	0.303	0.389
Cantabria	0.047	0.092	0.184	0.276	0.375	0.473
Castilla.y.León	0.080	0.091	0.184	0.280	0.383	0.489
Castilla.La.Mancha	0.101	0.101	0.204	0.309	0.425	0.542
Cataluña	0.087	0.091	0.183	0.278	0.381	0.488
Ceuta	0.213	0.156	0.322	0.506	0.710	0.928
Comunidad.Valenciana	0.066	0.081	0.166	0.252	0.346	0.444
Extremadura	0.053	0.087	0.176	0.268	0.366	0.469
Galicia	0.093	0.109	0.221	0.337	0.463	0.592
Islas.Baleares	0.057	0.078	0.157	0.238	0.324	0.414
La.Rioja	0.068	0.059	0.121	0.187	0.256	0.334
Madrid	0.081	0.062	0.127	0.195	0.267	0.347
Melilla	0.082	0.034	0.071	0.110	0.153	0.202
Murcia	0.054	0.076	0.155	0.235	0.321	0.412
Navarra	0.071	0.068	0.139	0.212	0.290	0.375
País.Vasco	0.070	0.073	0.148	0.225	0.308	0.396

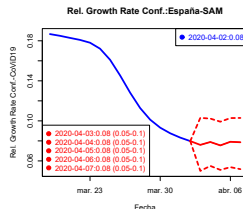
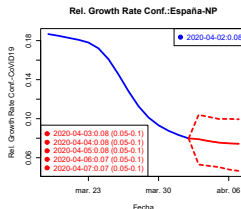
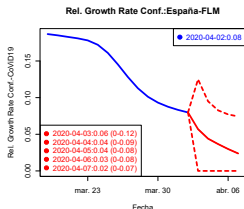
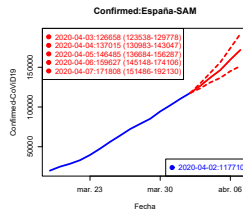
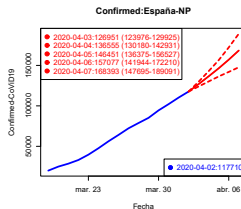
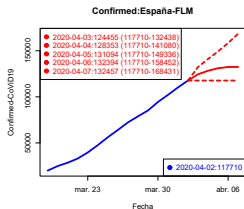
Table: Previsión Ratio Incr. Confirmados: Mod. No Paramétrico - Horizonte 1
- 5 días.

Tabla Ratio Incr. Confirmados: Mod. Aditivo.

	Last	H1	H2	H3	H4	H5
España	0.080	0.076	0.164	0.244	0.356	0.460
Andalucía	0.083	0.082	0.181	0.263	0.378	0.497
Aragón	0.086	0.107	0.219	0.342	0.458	0.556
Asturias	0.052	0.052	0.097	0.131	0.175	0.195
Canarias	0.054	0.063	0.122	0.173	0.246	0.298
Cantabria	0.047	0.036	0.032	0.018	0.037	0.047
Castilla.y.León	0.080	0.086	0.178	0.264	0.368	0.439
Castilla.La.Mancha	0.101	0.108	0.209	0.316	0.401	0.455
Cataluña	0.087	0.080	0.158	0.221	0.308	0.428
Ceuta	0.213	0.229	0.410	0.542	0.853	1.202
Comunidad.Valenciana	0.066	0.079	0.165	0.248	0.347	0.429
Extremadura	0.053	0.071	0.165	0.286	0.349	0.411
Galicia	0.093	0.107	0.204	0.315	0.397	0.466
Islas.Baleares	0.057	0.055	0.115	0.184	0.235	0.258
La.Rioja	0.068	0.074	0.139	0.200	0.267	0.357
Madrid	0.081	0.071	0.157	0.211	0.304	0.429
Melilla	0.082	0.083	0.174	0.251	0.350	0.465
Murcia	0.054	0.064	0.145	0.233	0.337	0.456
Navarra	0.071	0.071	0.145	0.209	0.302	0.403
País.Vasco	0.070	0.068	0.142	0.215	0.311	0.398

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

Confirmados: España

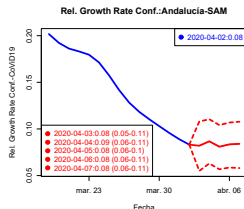
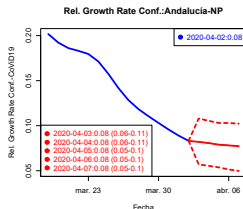
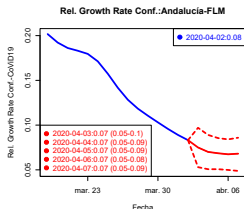
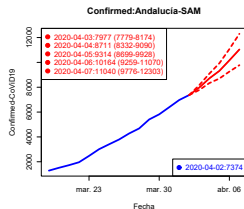
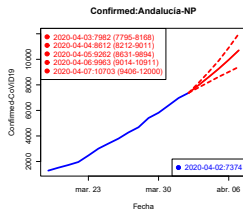
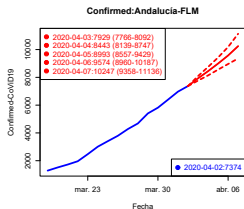


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

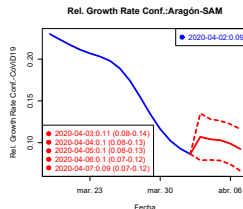
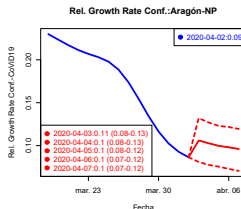
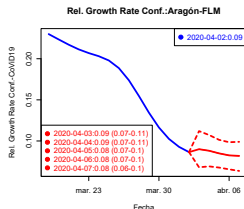
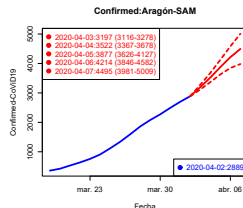
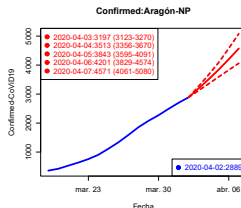
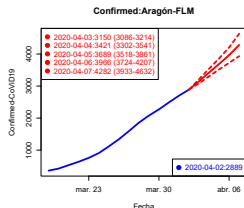
◀ Fallecidos

Confirmados: Andalucía



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

Confirmados: Aragón

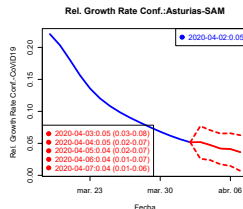
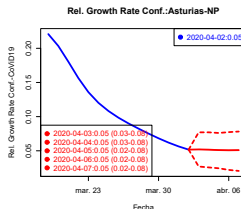
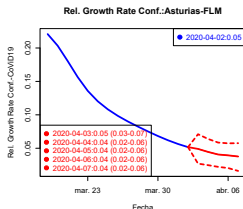
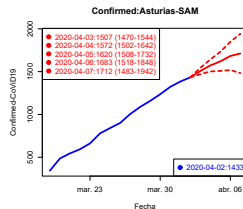
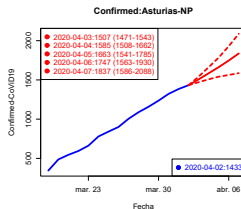
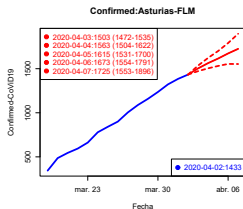


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Asturias

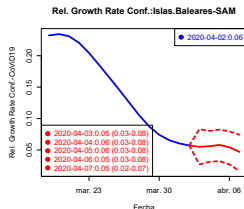
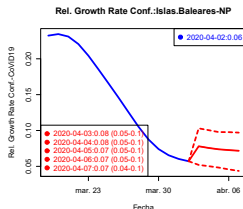
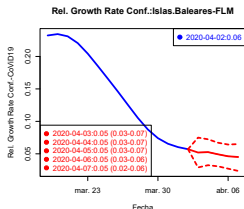
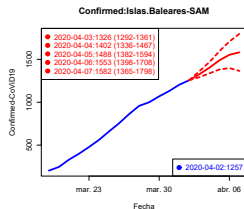
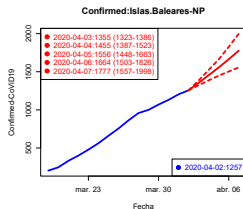
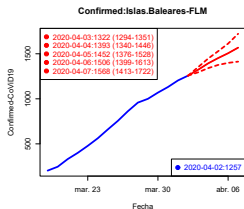


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Islas Baleares

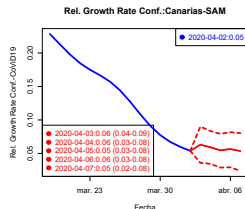
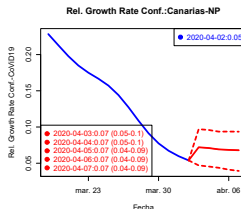
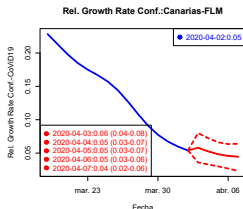
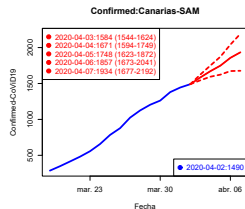
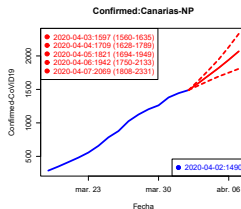
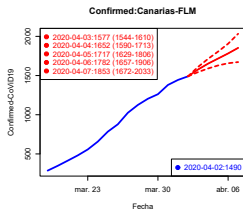


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

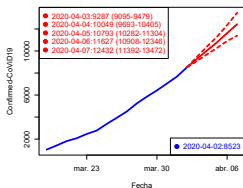
Confirmados: Canarias



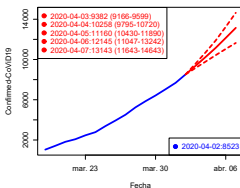
Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

Confirmados: Castilla-La Mancha

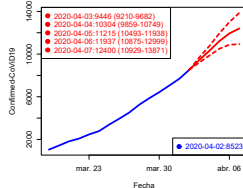
Confirmed:Castilla.La.Mancha-FLM



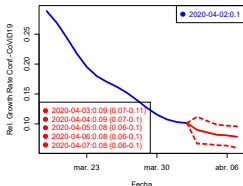
Confirmed:Castilla.La.Mancha-NP



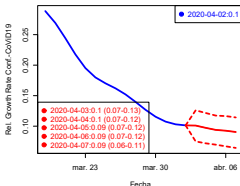
Confirmed:Castilla.La.Mancha-SAM



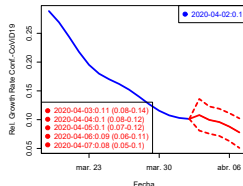
Rel. Growth Rate Conf.:Castilla.La.Mancha-FLM



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



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

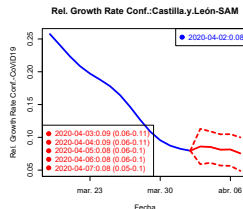
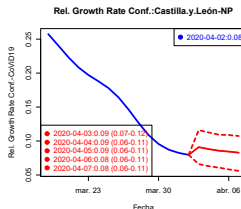
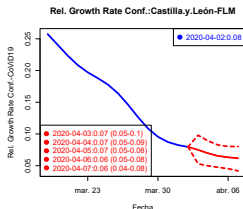
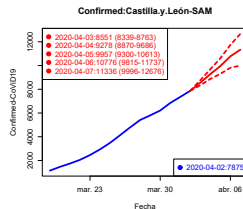
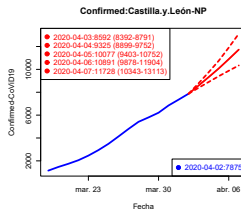
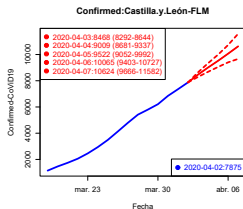


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Castilla y León

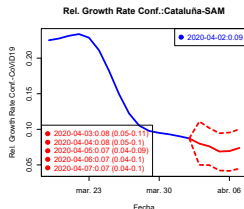
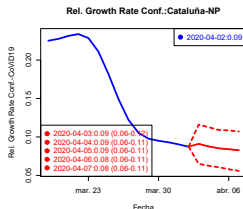
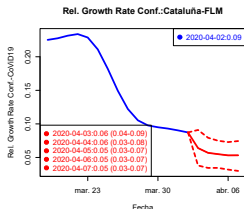
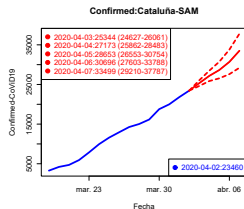
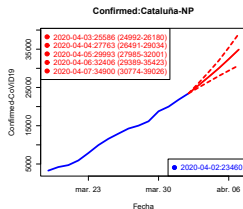
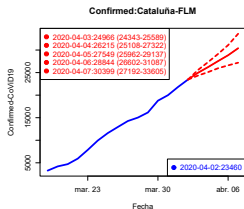


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Cataluña

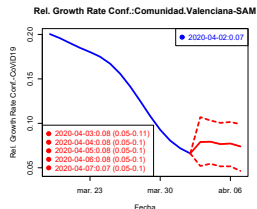
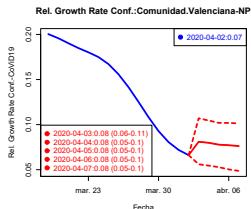
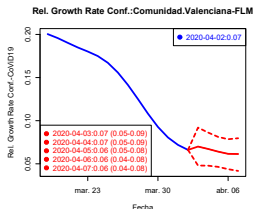
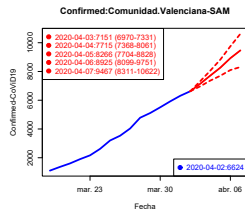
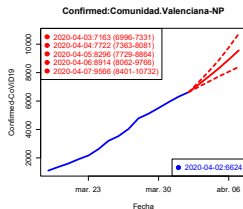
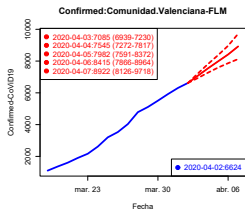


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: C. Valenciana

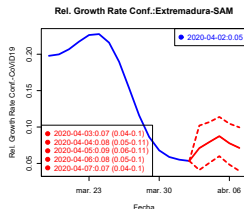
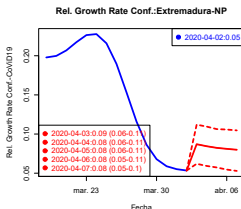
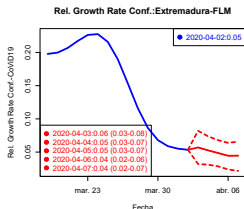
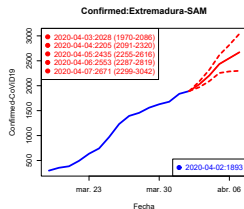
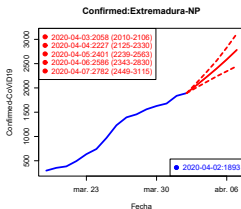
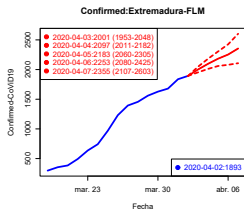


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Extremadura

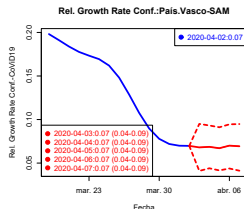
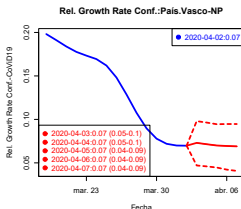
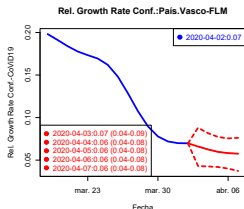
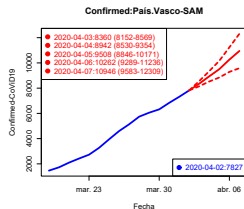
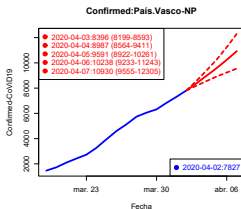
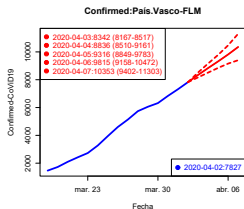


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: País Vasco

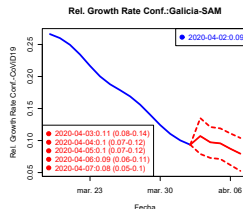
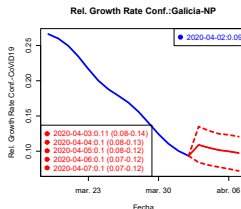
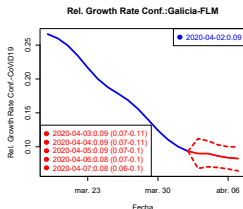
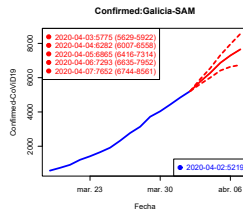
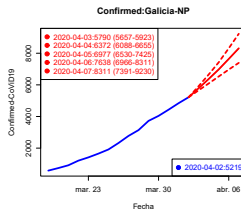
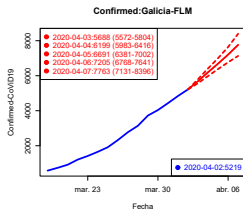


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Galicia

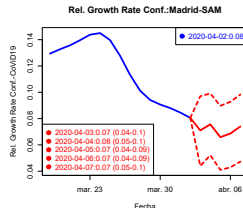
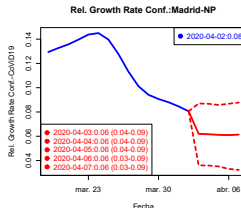
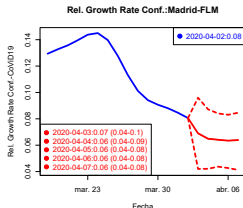
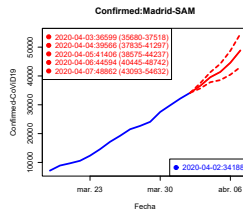
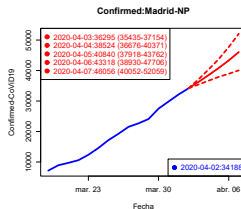
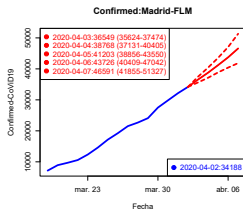


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Madrid

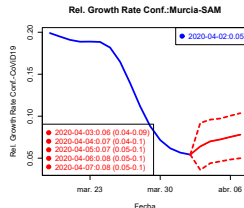
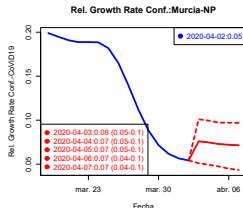
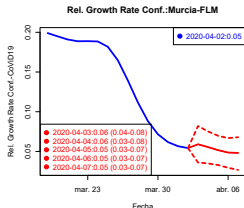
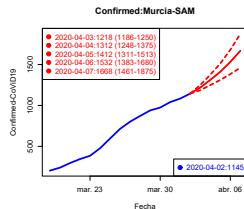
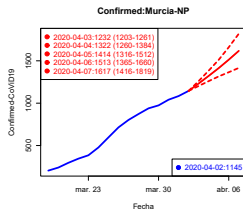
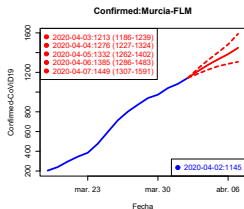


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

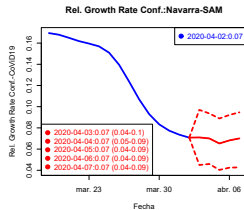
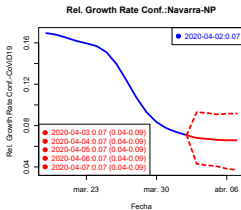
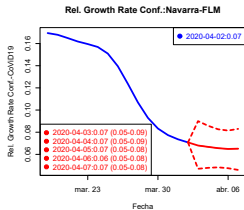
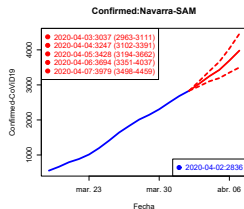
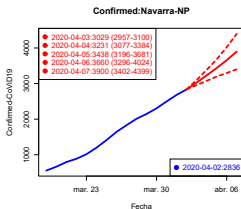
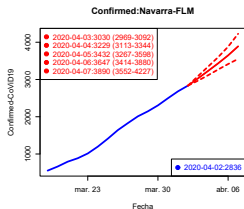
◀ Fallecidos

Confirmados: Murcia



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

Confirmados: Navarra

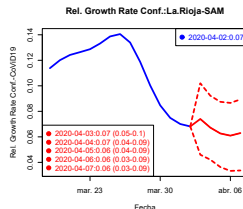
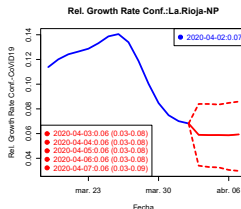
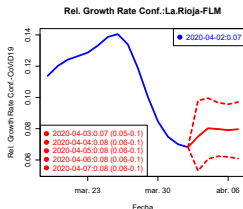
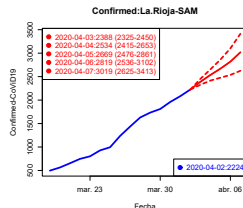
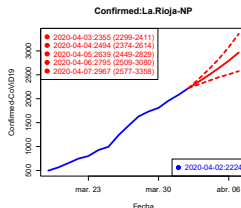
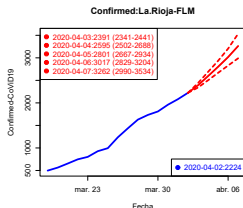


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: La Rioja



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

◀ Confirmados

◀ Fallecidos

Table of Contents

1 Casos Confirmados

- Predicciones

2 Fallecidos

- Predicciones Fallecidos

Modelos para fallecidos por CoViD-19

Número de datos funcionales: 2350

Países/Regiones distintos incorporados: 62

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	Medida	FLM	NP	SAM
H1	σ_R^2	0.054	0.041	0.05
H1	$\sigma_R^2(rob.)$	0.058	0.03	0.052
H1	r^2	0.117	0.355	0.172
H2	σ_R^2	0.153	0.121	0.14
H2	$\sigma_R^2(rob.)$	0.129	0.125	0.134
H2	r^2	0.187	0.377	0.251
H3	σ_R^2	0.37	0.304	0.342
H3	$\sigma_R^2(rob.)$	0.377	0.285	0.374
H3	r^2	0.217	0.379	0.272

Tabla Previsión Fallecidos: Mod. Lineal.

	Last	H1	H2	H3	H4	H5
España	10935	11757	12611	13638	14352	15045
Andalucía	376	418	461	519	557	596
Aragón	224	255	293	327	379	441
Asturias	70	70	70	70	70	70
Canarias	73	79	85	92	95	97
Cantabria	64	78	91	110	117	125
Castilla.y.León	723	784	852	914	968	1027
Castilla.La.Mancha	916	987	1053	1134	1149	1158
Cataluña	2335	2516	2677	2888	2942	2948
Ceuta	1	1	2	2	3	4
Comunidad.Valenciana	511	550	588	639	651	648
Extremadura	200	232	264	306	345	388
Galicia	138	156	175	196	211	225
Islas.Baleares	69	79	89	103	109	113
La.Rioja	109	109	109	109	109	109
Madrid	4483	4702	4922	5227	5406	5548
Melilla	2	2	3	4	4	5
Murcia	46	50	54	57	61	65
Navarra	151	156	159	165	157	151
País.Vasco	444	481	524	568	616	670

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

Tabla Previsión Fallecidos: Mod. No Paramétrico.

	Last	H1	H2	H3	H4	H5
España	10935	11420	11970	12680	13559	14610
Andalucía	376	394	414	440	472	511
Aragón	224	239	257	280	308	341
Asturias	70	72	74	77	81	87
Canarias	73	76	80	84	90	97
Cantabria	64	69	75	82	90	101
Castilla.y.León	723	765	813	874	947	1036
Castilla.La.Mancha	916	979	1053	1143	1254	1389
Cataluña	2335	2469	2622	2815	3042	3317
Ceuta	1	1	2	3	3	4
Comunidad.Valenciana	511	535	562	598	641	693
Extremadura	200	210	222	237	255	276
Galicia	138	149	161	177	196	219
Islas.Baleares	69	72	76	81	86	93
La.Rioja	109	112	116	120	126	134
Madrid	4483	4618	4775	4976	5245	5573
Melilla	2	2	2	2	2	2
Murcia	46	48	50	53	57	61
Navarra	151	157	163	171	181	194
País.Vasco	444	462	483	510	543	583

Table: Previsión fallecidos: Mod. No Paramétrico - Horizonte 1 – 5 días.

Tabla Previsión Fallecidos: Mod. Aditivo.

	Last	H1	H2	H3	H4	H5
España	10935	11854	11467	11538	10935	10935
Andalucía	376	424	452	459	449	444
Aragón	224	259	287	314	356	387
Asturias	70	70	70	70	70	70
Canarias	73	78	73	76	73	73
Cantabria	64	76	64	85	79	64
Castilla.y.León	723	770	742	729	723	723
Castilla.La.Mancha	916	949	916	916	916	916
Cataluña	2335	2501	2335	2335	2335	2335
Ceuta	1	1	1	2	2	3
Comunidad.Valenciana	511	544	511	511	511	511
Extremadura	200	236	261	293	308	337
Galicia	138	152	151	173	181	197
Islas.Baleares	69	80	72	83	73	69
La.Rioja	109	109	109	109	109	109
Madrid	4483	4825	4560	4652	4483	4483
Melilla	2	3	3	4	4	4
Murcia	46	50	52	46	46	46
Navarra	151	154	151	151	151	151
País.Vasco	444	493	517	564	602	650

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

Tabla Ratio Incr. Fallecidos: Mod. Lineal.

	Last	H1	H2	H3	H4	H5
España	0.104	0.075	0.153	0.247	0.312	0.376
Andalucía	0.129	0.113	0.227	0.378	0.480	0.584
Aragón	0.176	0.136	0.309	0.456	0.687	0.962
Asturias	0.088	0.000	0.000	0.000	0.000	0.000
Canarias	0.121	0.082	0.165	0.259	0.302	0.329
Cantabria	0.188	0.216	0.422	0.704	0.823	0.945
Castilla.y.León	0.127	0.085	0.178	0.263	0.339	0.420
Castilla.La.Mancha	0.100	0.078	0.150	0.237	0.254	0.263
Cataluña	0.129	0.077	0.147	0.237	0.260	0.262
Ceuta	0.004	0.138	0.347	0.431	0.789	1.376
Comunidad.Valenciana	0.140	0.076	0.150	0.250	0.274	0.268
Extremadura	0.152	0.157	0.320	0.529	0.720	0.936
Galicia	0.181	0.127	0.263	0.420	0.526	0.627
Islas.Baleares	0.184	0.146	0.282	0.484	0.566	0.626
La.Rioja	0.098	0.004	0.000	0.001	0.000	0.000
Madrid	0.076	0.049	0.098	0.166	0.206	0.237
Melilla	0.164	0.141	0.286	0.510	0.712	0.947
Murcia	0.140	0.082	0.169	0.231	0.313	0.397
Navarra	0.104	0.034	0.055	0.091	0.039	0.000
País.Vasco	0.105	0.083	0.179	0.279	0.386	0.507

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

Tabla Ratio Incr. Fallecidos: Mod. No Paramétrico.

	Last	H1	H2	H3	H4	H5
España	0.104	0.044	0.095	0.160	0.240	0.336
Andalucía	0.129	0.047	0.101	0.171	0.256	0.358
Aragón	0.176	0.069	0.148	0.251	0.373	0.518
Asturias	0.088	0.027	0.060	0.100	0.159	0.233
Canarias	0.121	0.042	0.090	0.149	0.226	0.318
Cantabria	0.188	0.075	0.170	0.277	0.401	0.573
Castilla.y.León	0.127	0.058	0.125	0.209	0.310	0.432
Castilla.La.Mancha	0.100	0.069	0.149	0.248	0.369	0.516
Cataluña	0.129	0.058	0.123	0.206	0.303	0.420
Ceuta	0.004	0.213	0.473	0.751	1.137	1.686
Comunidad.Valenciana	0.140	0.047	0.101	0.169	0.254	0.355
Extremadura	0.152	0.052	0.109	0.185	0.274	0.377
Galicia	0.181	0.077	0.167	0.279	0.414	0.580
Islas.Baleares	0.184	0.048	0.101	0.168	0.250	0.350
La.Rioja	0.098	0.028	0.061	0.102	0.158	0.227
Madrid	0.076	0.030	0.065	0.110	0.170	0.243
Melilla	0.164	0.014	0.033	0.055	0.089	0.133
Murcia	0.140	0.044	0.093	0.157	0.235	0.329
Navarra	0.104	0.036	0.078	0.131	0.200	0.283
País.Vasco	0.105	0.041	0.088	0.147	0.223	0.313

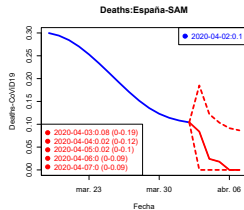
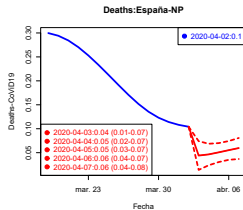
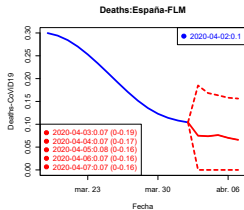
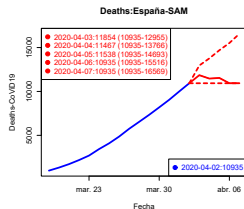
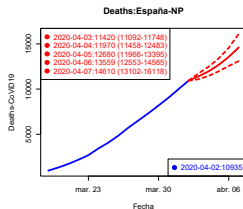
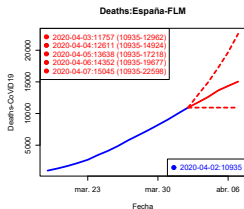
Table: Previsión Ratio Incr. Fallecidos: Mod. No Paramétrico - Horizonte 1 – 5 días.

Tabla Ratio Incr. Fallecidos: Mod. Aditivo.

	Last	H1	H2	H3	H4	H5
España	0.104	0.084	0.049	0.055	0.000	0.000
Andalucía	0.129	0.127	0.201	0.221	0.195	0.180
Aragón	0.176	0.157	0.280	0.401	0.588	0.724
Asturias	0.088	0.000	0.000	0.000	0.000	0.000
Canarias	0.121	0.066	0.000	0.044	0.000	0.000
Cantabria	0.188	0.188	0.000	0.323	0.226	0.000
Castilla.y.León	0.127	0.065	0.026	0.009	0.000	0.000
Castilla.La.Mancha	0.100	0.036	0.000	0.000	0.000	0.000
Cataluña	0.129	0.071	0.000	0.000	0.000	0.000
Ceuta	0.004	0.170	0.238	0.286	0.656	1.224
Comunidad.Valenciana	0.140	0.065	0.000	0.000	0.000	0.000
Extremadura	0.152	0.180	0.303	0.464	0.536	0.682
Galicia	0.181	0.102	0.094	0.255	0.308	0.423
Islas.Baleares	0.184	0.157	0.046	0.194	0.051	0.000
La.Rioja	0.098	0.000	0.000	0.000	0.000	0.000
Madrid	0.076	0.076	0.017	0.038	0.000	0.000
Melilla	0.164	0.229	0.268	0.523	0.634	0.605
Murcia	0.140	0.091	0.135	0.000	0.000	0.000
Navarra	0.104	0.018	0.000	0.000	0.000	0.000
País.Vasco	0.105	0.111	0.165	0.270	0.354	0.463

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

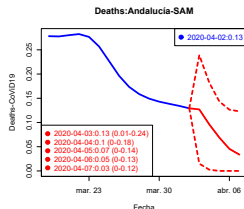
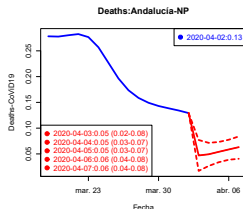
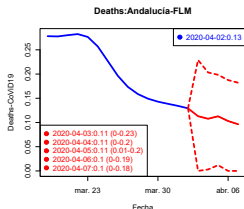
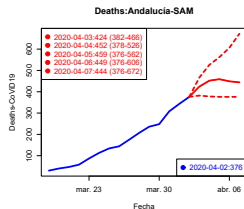
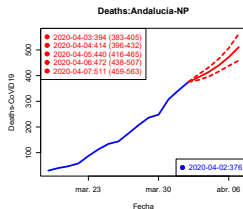
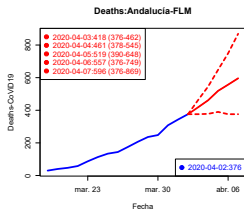
Fallecidos: España



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

◀ Confirmados

◀ Fallecidos

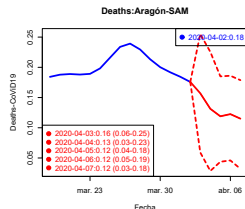
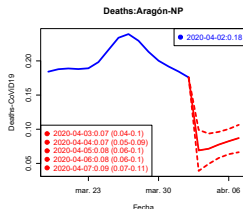
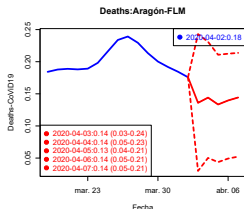
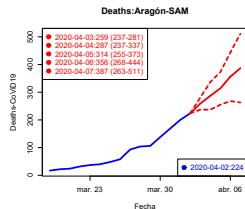
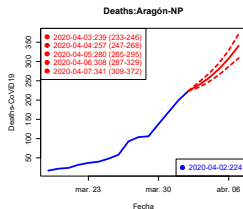
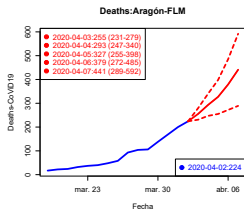


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Aragón

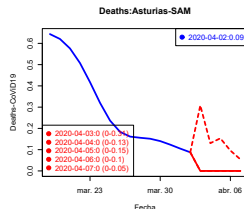
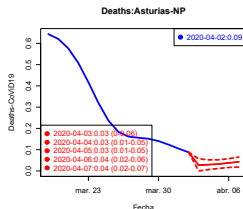
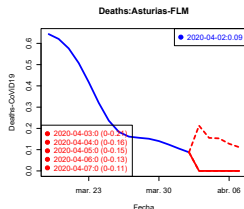
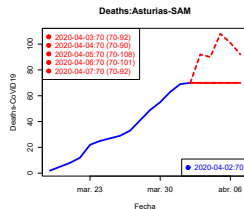
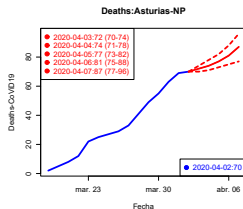
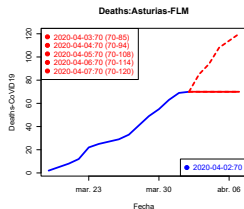


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Asturias

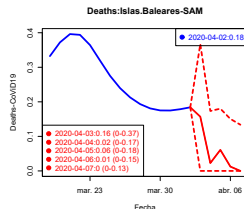
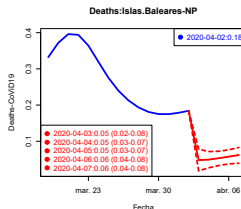
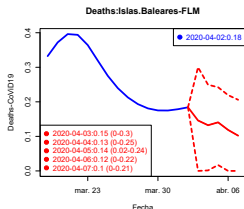
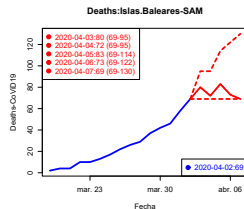
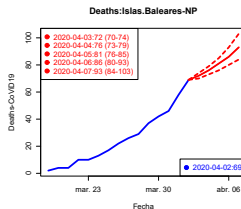
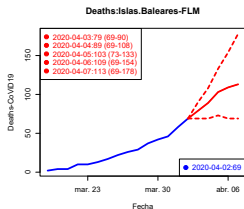


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Islas Baleares

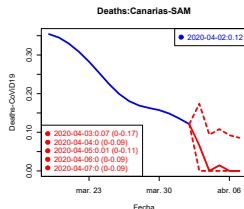
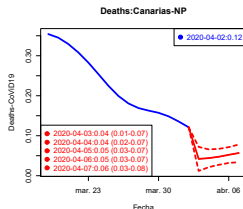
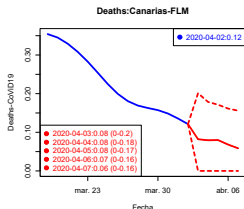
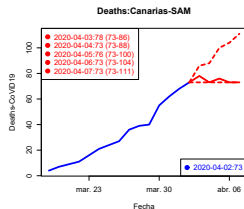
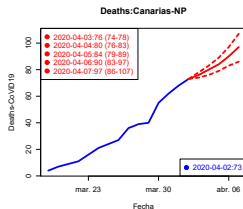
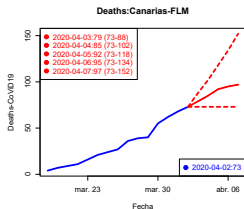


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Canarias

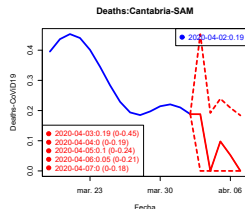
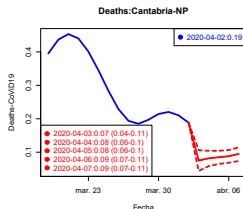
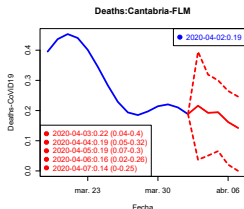
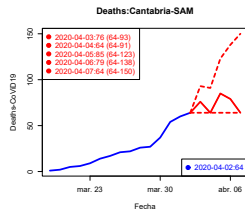
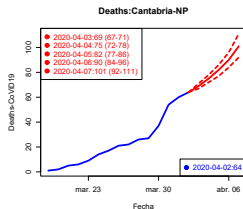
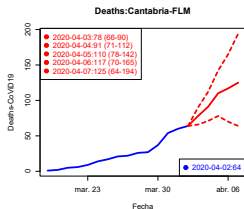


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Cantabria

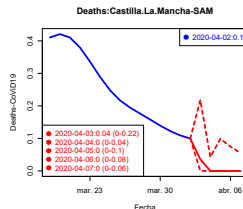
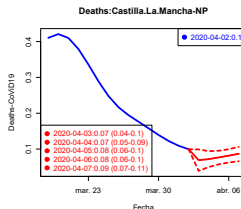
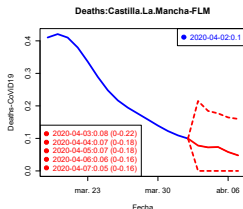
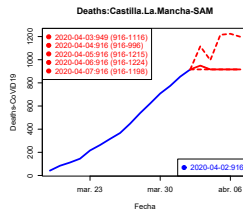
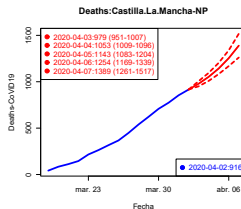
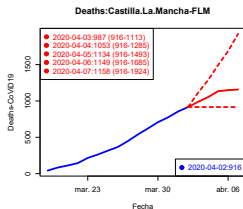


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

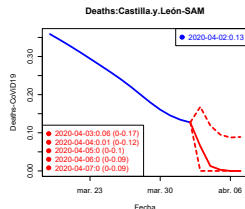
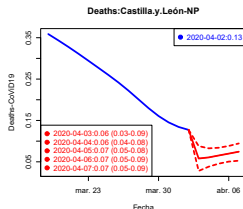
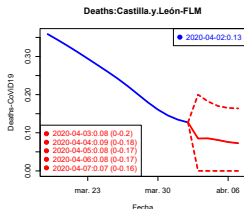
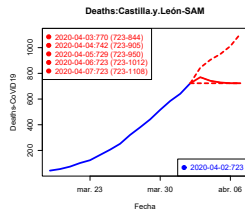
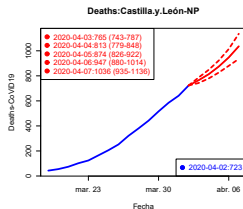
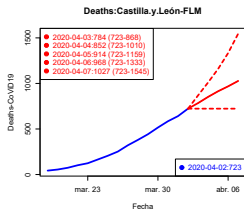
Fallecidos: Castilla-La Mancha



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

◀ Fallecidos

Fallecidos: Castilla y León

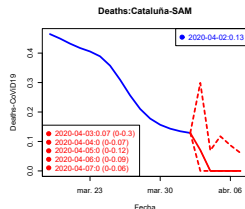
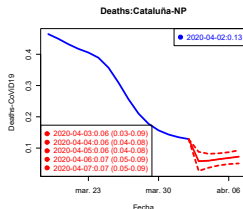
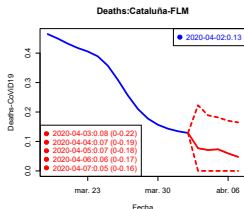
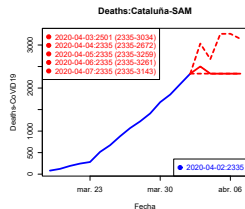
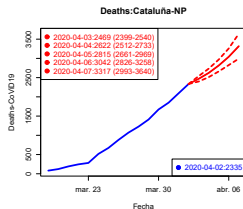
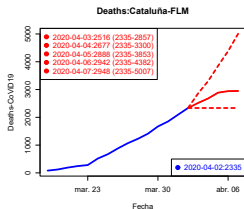


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Cataluña

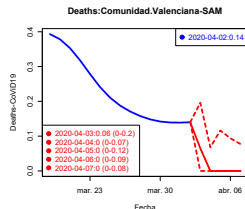
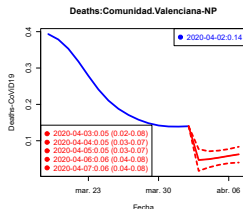
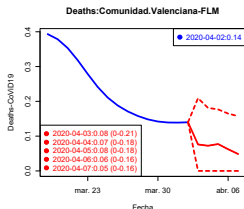
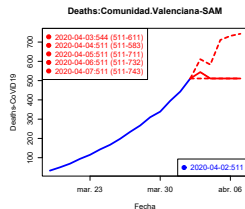
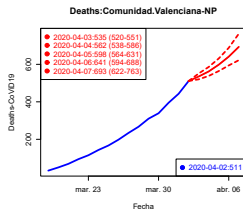
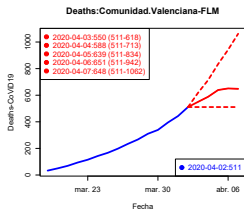


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

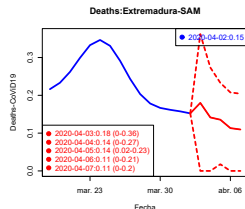
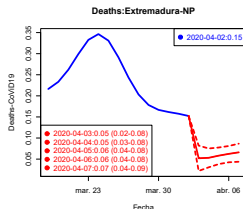
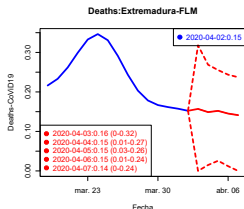
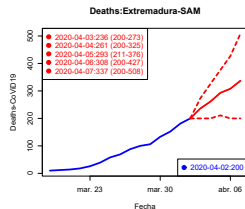
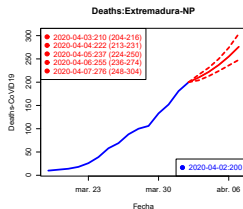
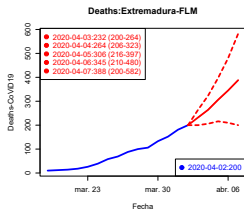
Fallecidos: C. Valenciana



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

◀ Fallecidos

Fallecidos: Extremadura

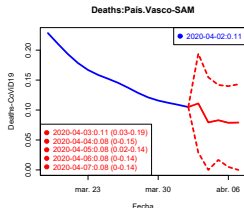
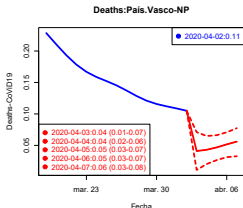
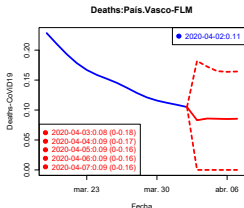
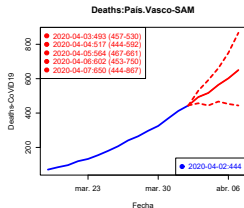
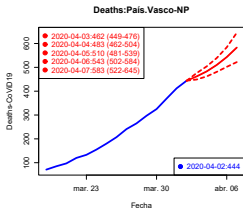
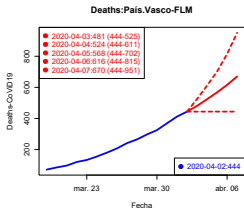


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: País Vasco

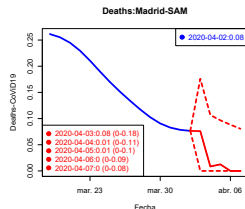
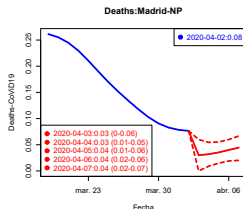
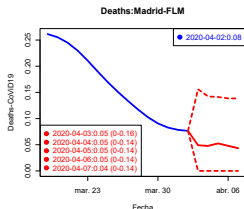
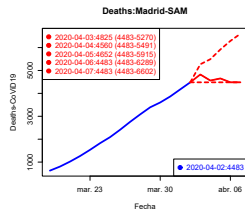
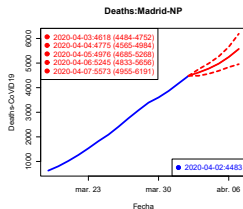
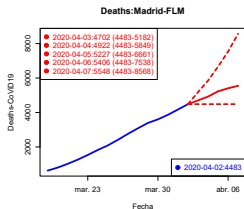


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Madrid

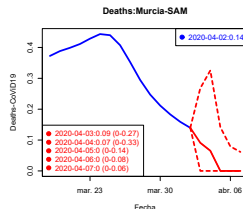
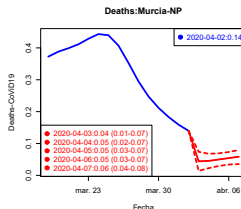
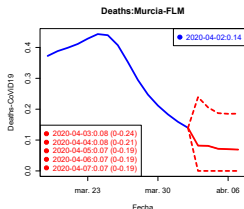
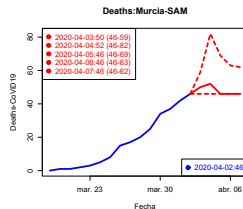
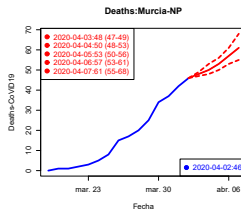
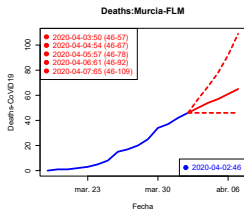


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Murcia

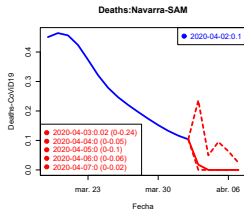
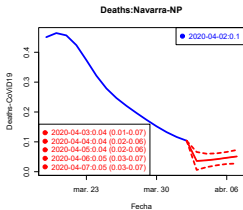
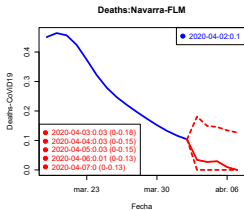
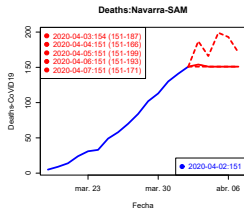
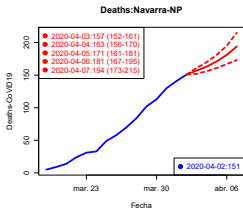
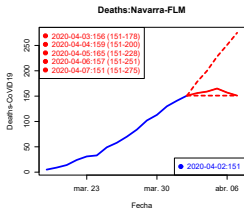


Los valores del Ratio de incremento de H2-H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Navarra

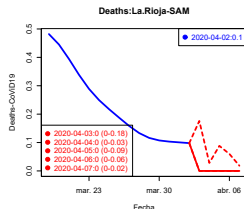
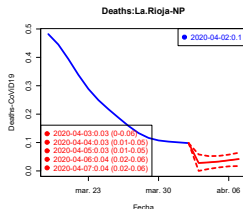
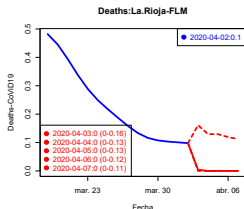
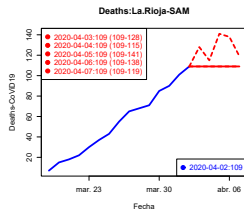
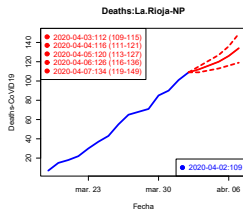
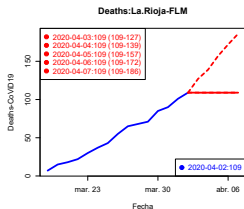


Los valores del Ratio de incremento de H2–H5 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: La Rioja



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

◀ Confirmados

◀ Fallecidos

Breve descripción del Modelo de predicción

Objetivo: Predecir ratio de incremento de casos confirmados a 1, 2, o 3 días: $r^{(k)}(t) = \frac{x_{t+k} - x_t}{x_t + 1}$

Información usada: Pasado de esta variable suavizado (retardo 1) durante los últimos 15 días:

$$R^{(1)} = \{r^{(1)}(-14), \dots, r^{(1)}(0)\}.$$

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 anormalmente valores 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: $f(R^{(1)}) = \int_{-14}^0 R^{(1)}(t)\beta(t)dt$
- 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.