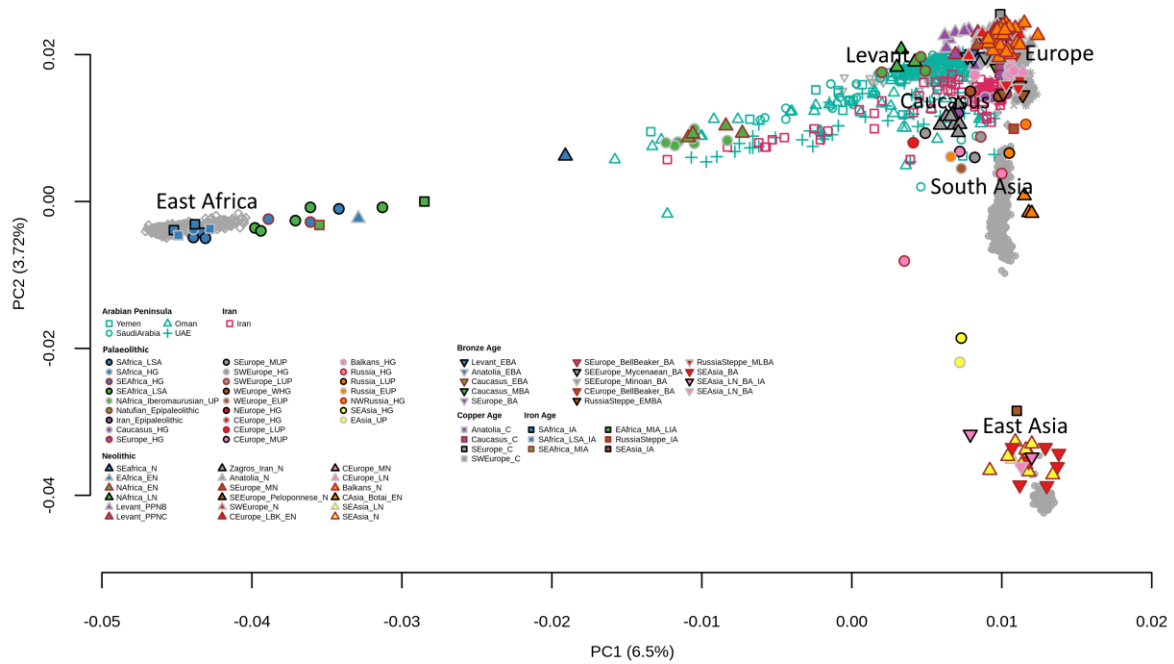
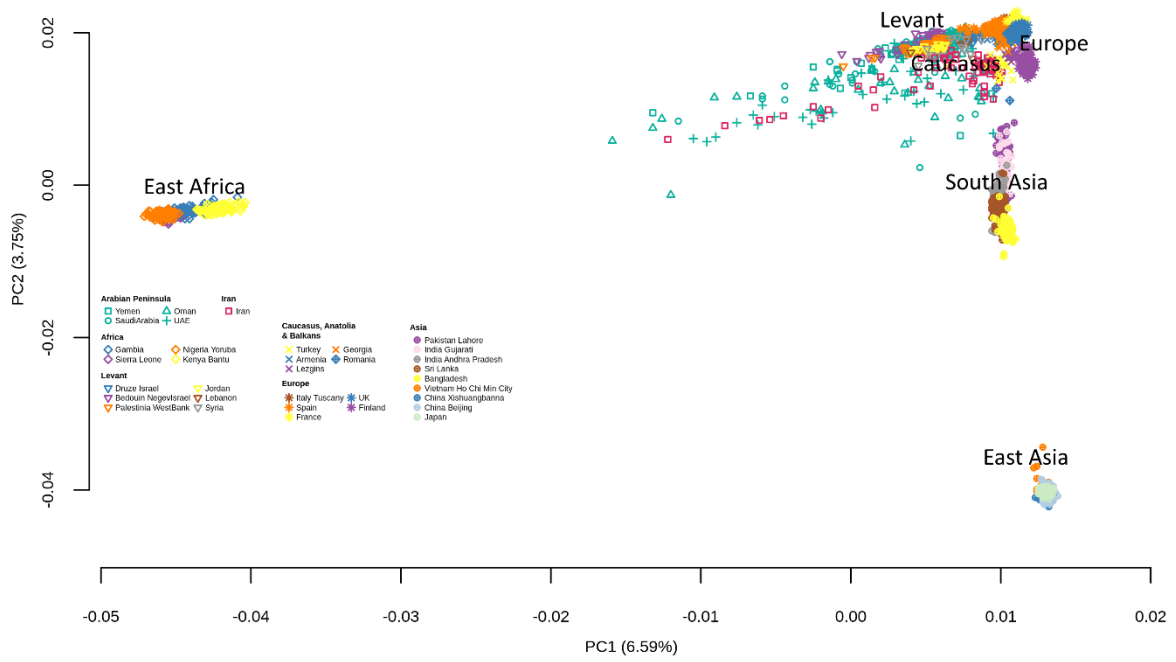


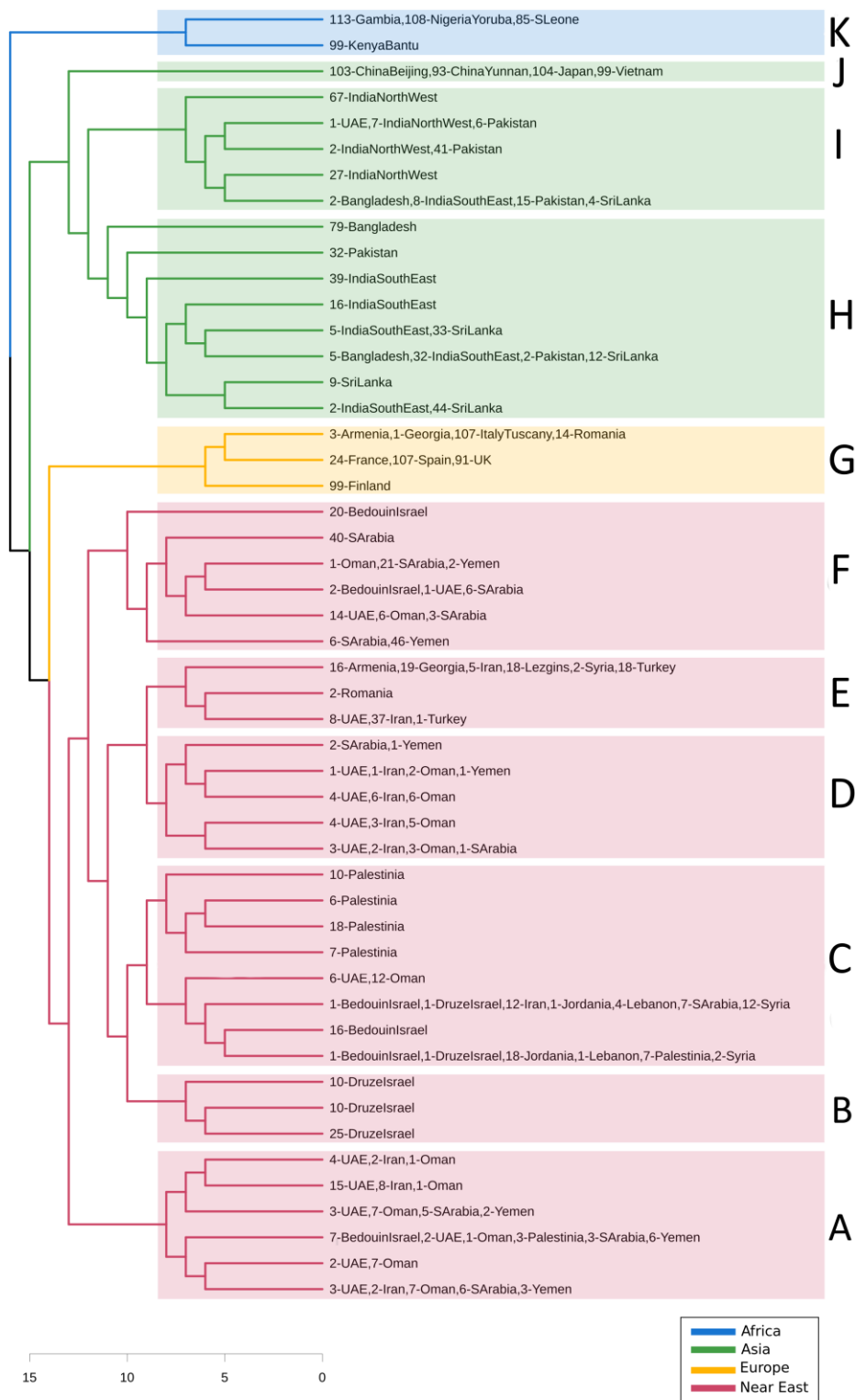
Projecting ancient ancestry in modern-day Arabians and Iranians: a key role of the past exposed Arabo-Persian Gulf on human migrations



Supplemental Figure 1: Principal components analysis of present-day samples from the Arabian Peninsula (blue), Iran (red) and neighbouring populations (grey, to avoid visual clutter) with projected ancient samples in different colours and formats according to the legend. Abbreviations are as follows: E, Early; M, Middle; L, Late; HG, hunter-gatherer; N, Neolithic; C, Chalcolithic; BA, Bronze Age; IA, Iron Age; UP, upper Palaeolithic; EPI, Epipaleolithic.

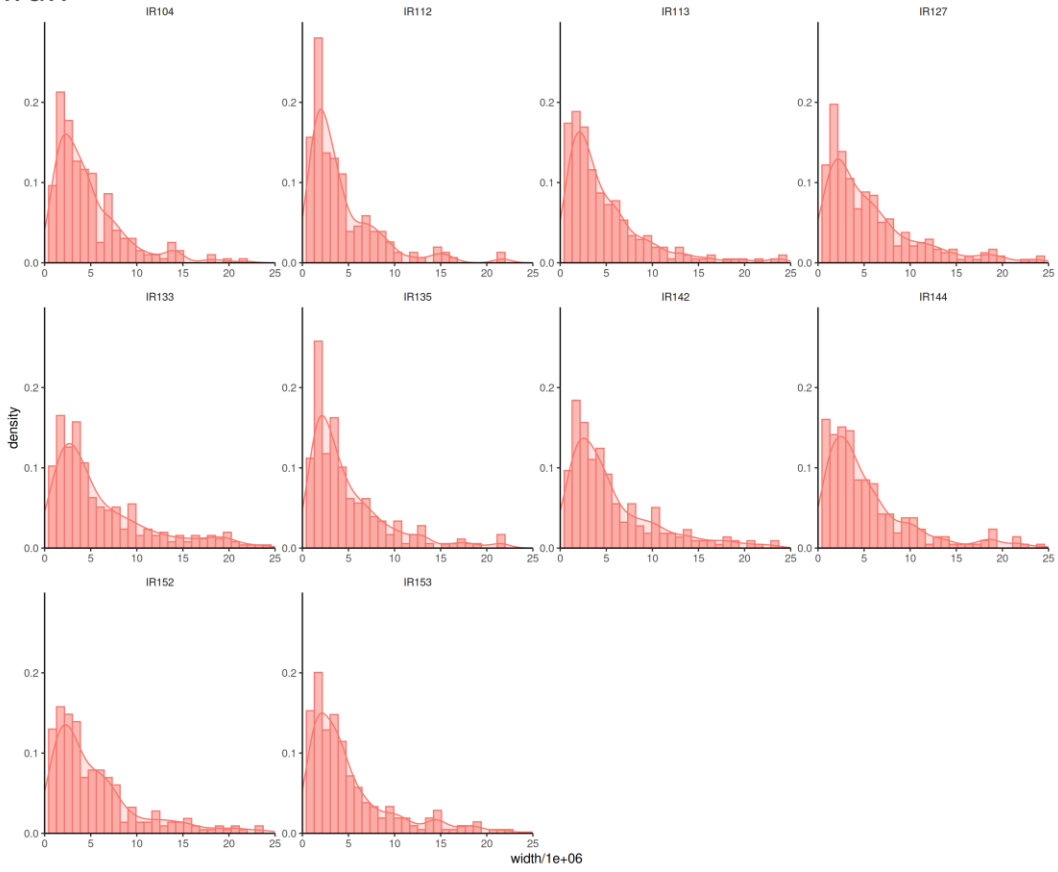


Supplemental Figure 2: Principal components analysis of present-day individuals.

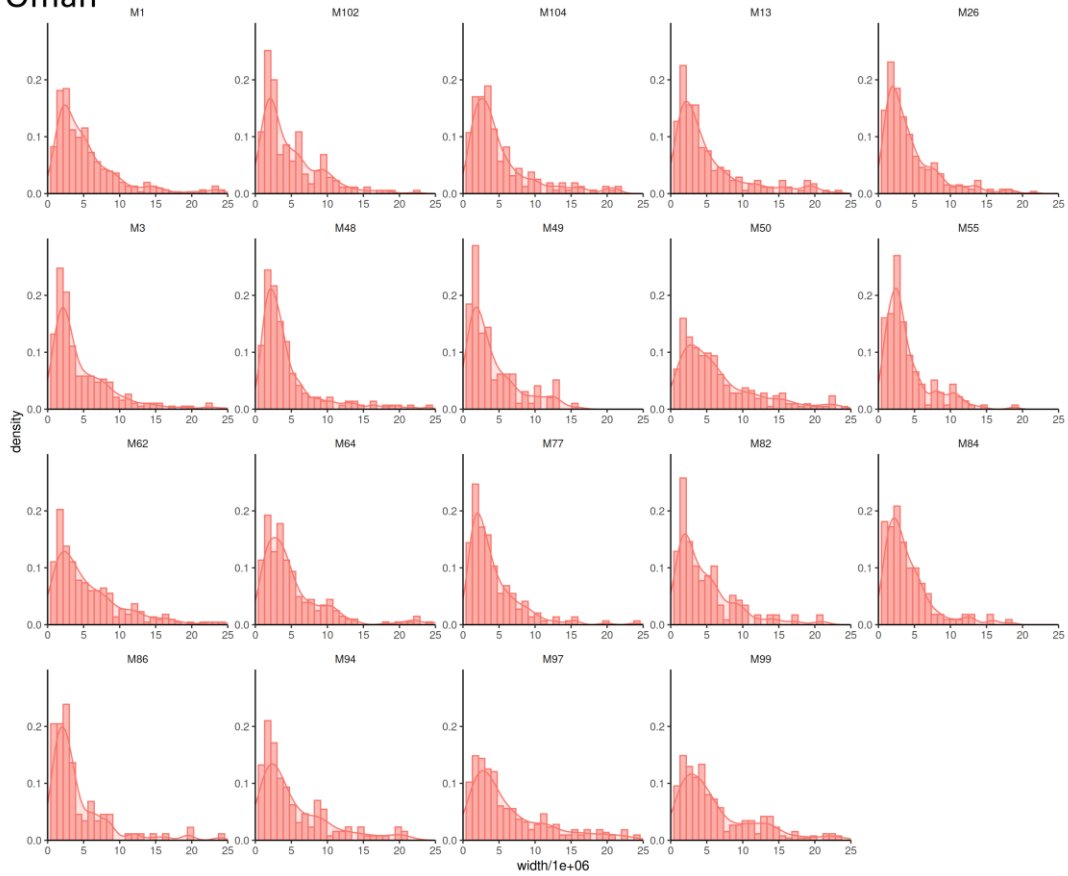


Supplemental Figure 3: Hierarchical clustering tree from which were clusters based on sample geographical locations were inferred.

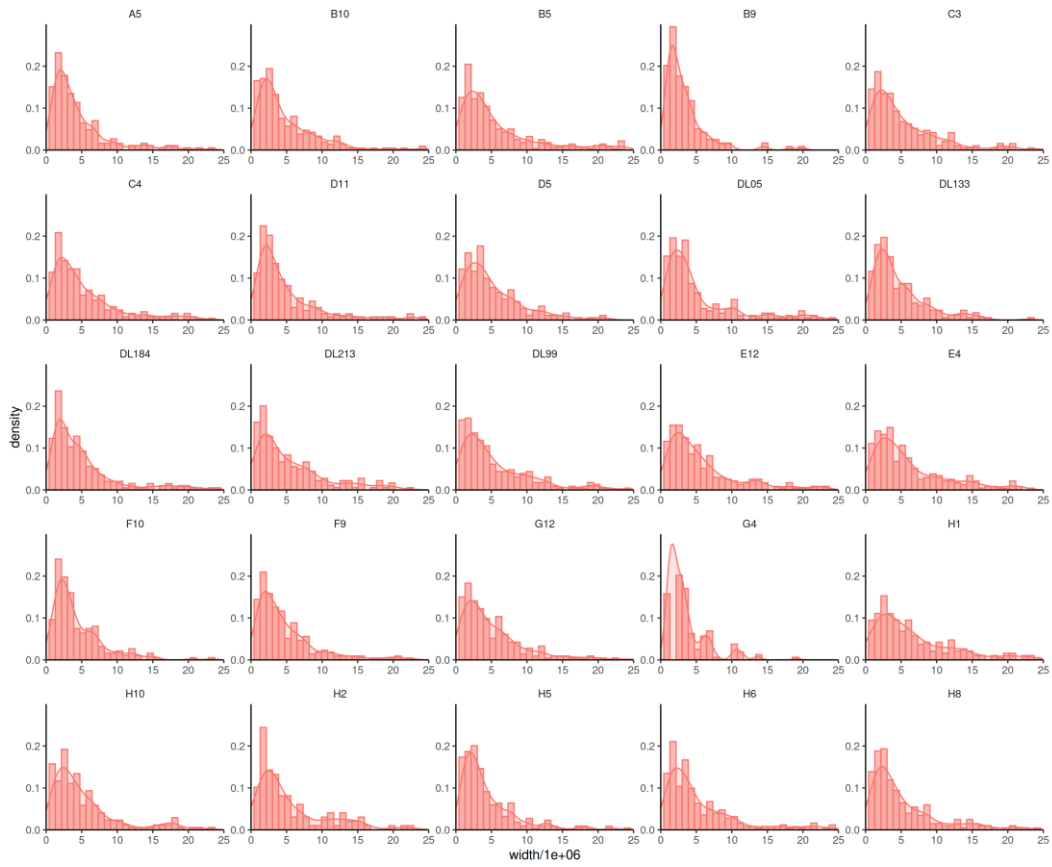
Iran



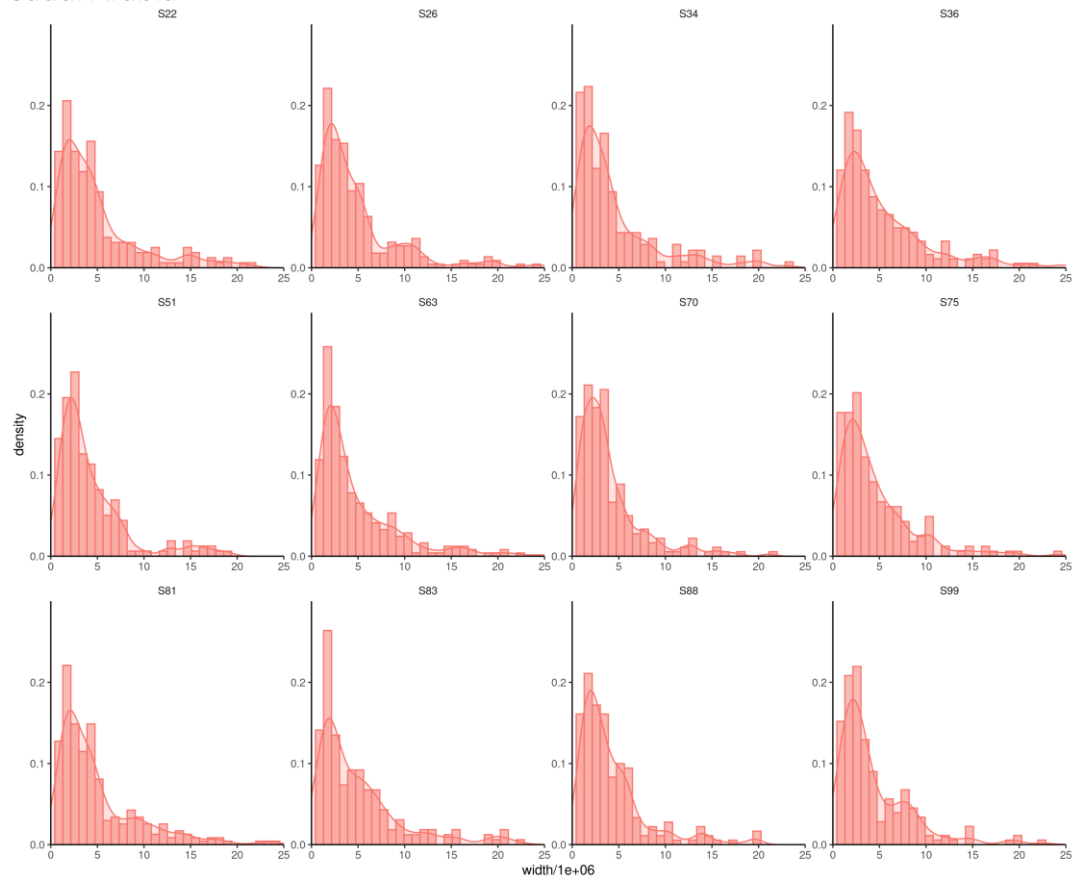
Oman



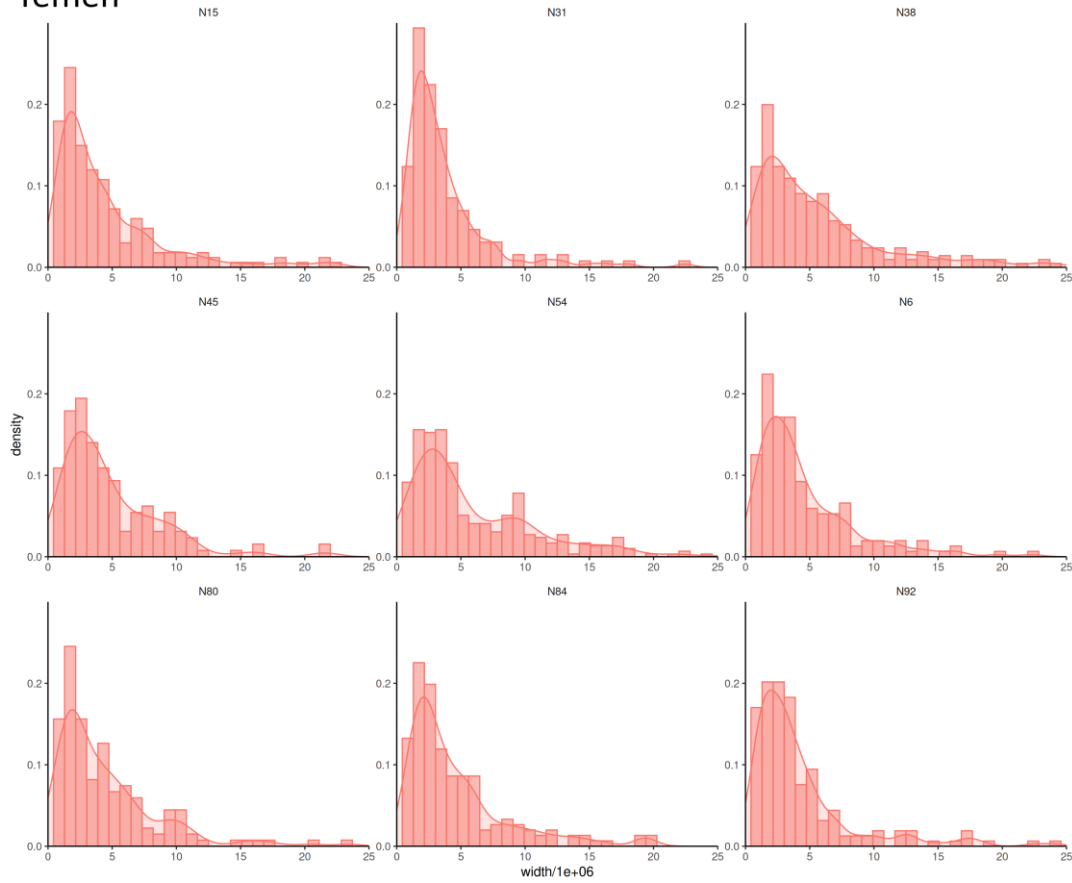
UAE



Saudi Arabia

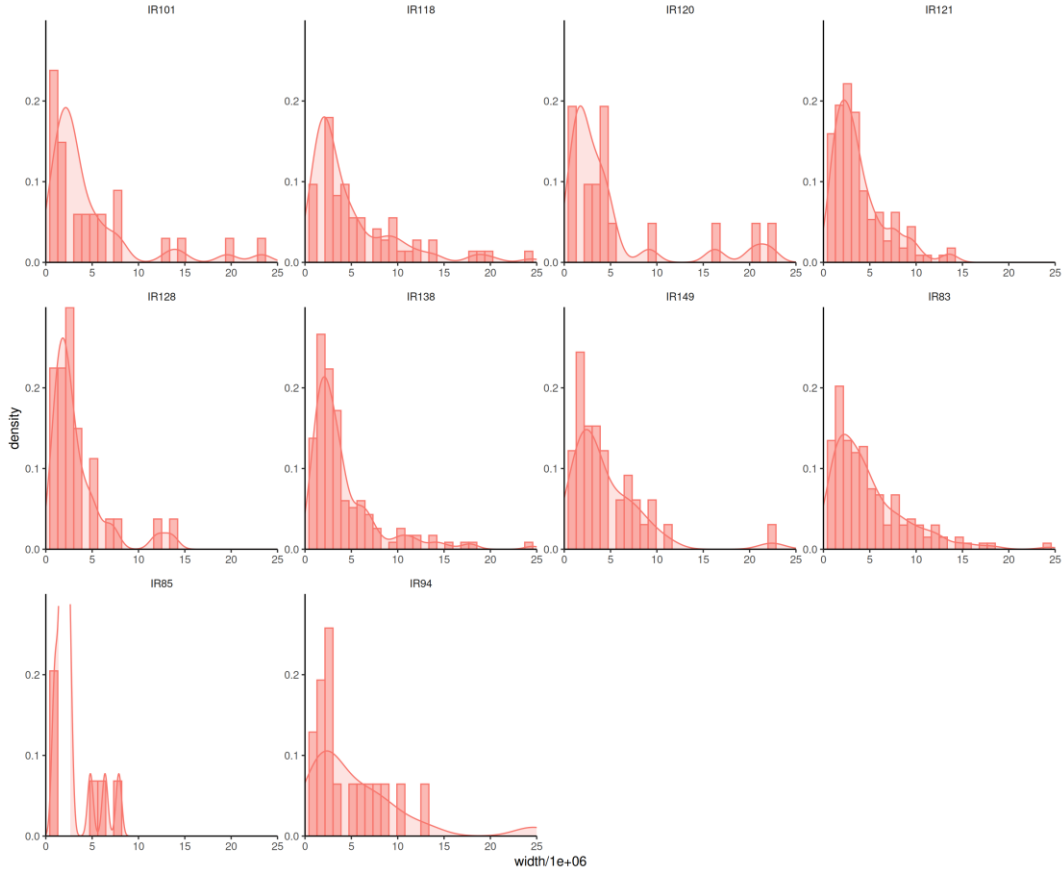


Yemen

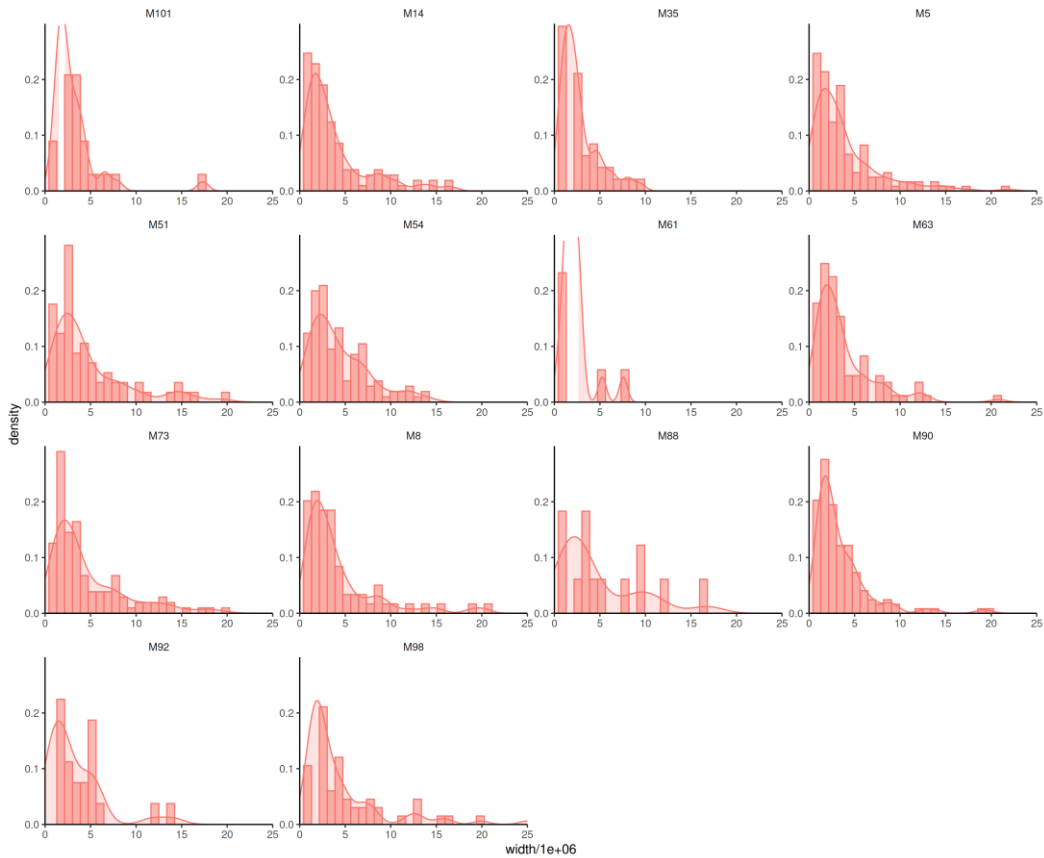


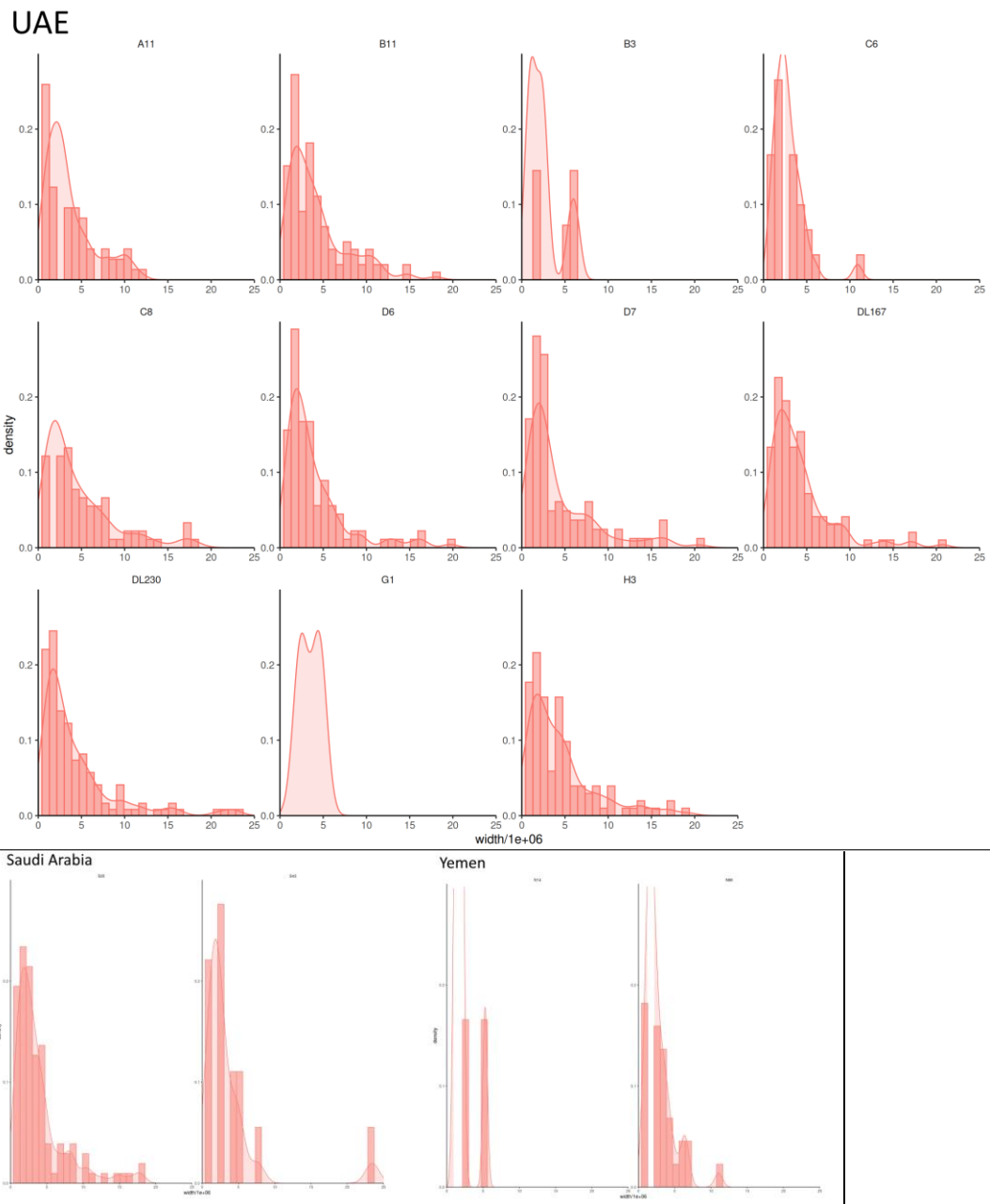
Supplemental Figure 4: Median sizes (in cM) of the sub-Saharan African blocks estimated per AP and Iranian individuals affiliated in cluster A.

Iran

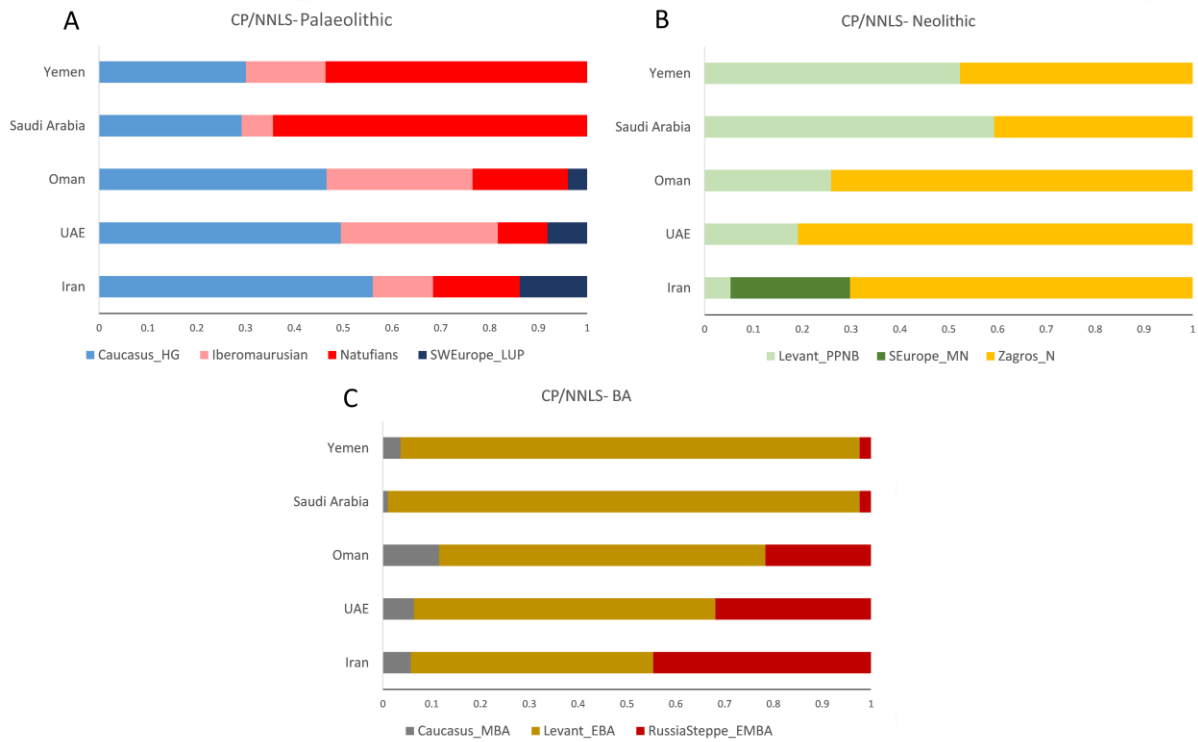


Oman

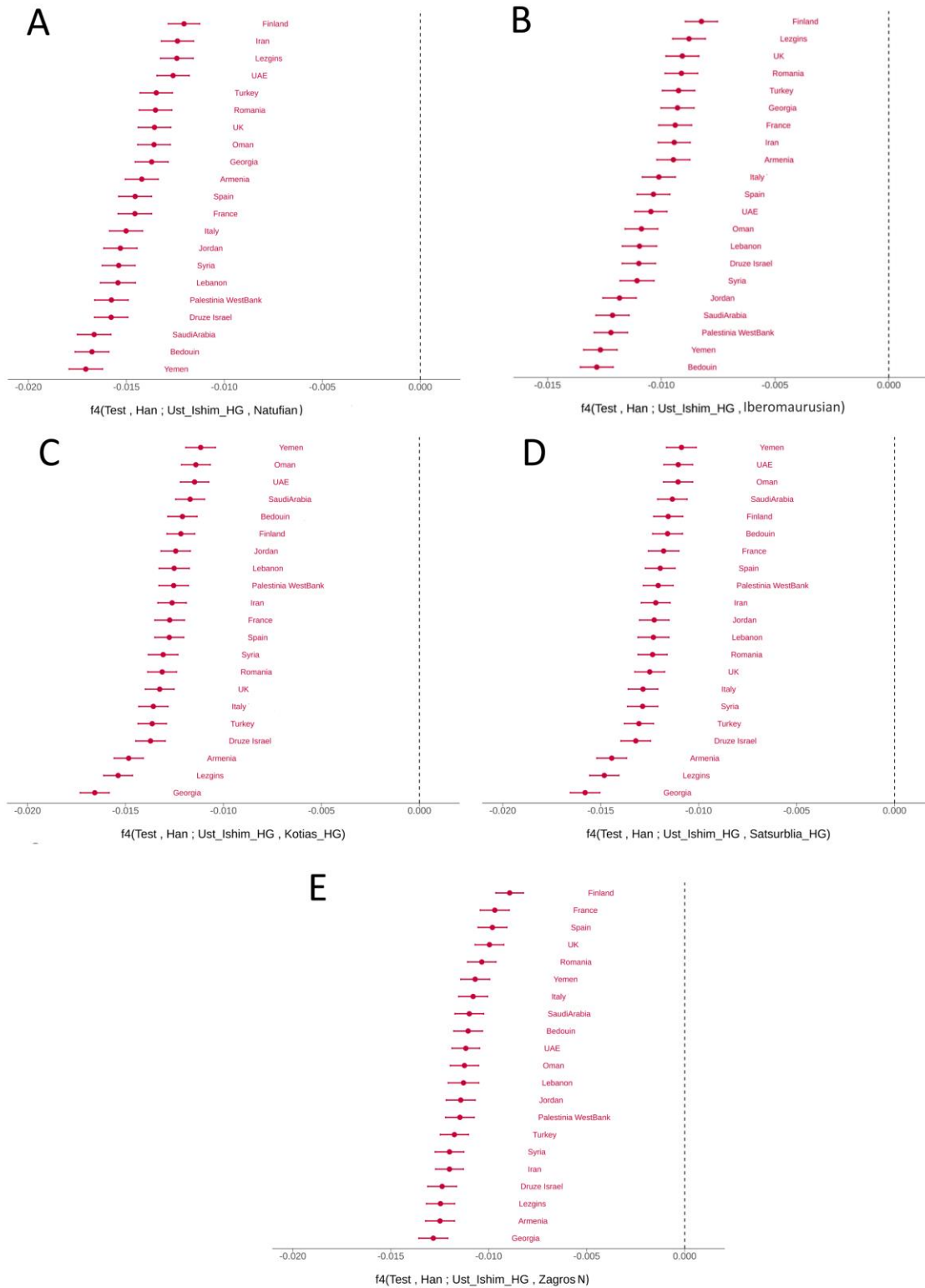




Supplemental Figure 5: Median sizes (in cM) of the sub-Saharan African blocks estimated per AP and Iranian individuals affiliated in cluster D.



Supplemental Figure 6: Population-based ancestry estimates for all the modern populations inferred by CHROMOPAINTER via an NNLS-based analysis. A, Palaeolithic period; B, Neolithic period; C, Bronze age period. Abbreviations are as follows: E, Early; M, Middle; L, Late; HG, hunter-gatherer; N, Neolithic; BA, Bronze Age; UP, upper Palaeolithic.



Supplemental Figure 7: Alternative testing of the statistic $f_4(\text{Test, Han; Ust'-Ishim, X})$, where Ust'-Ishim and X were used as proxies for non-basal and basal Eurasian lineage, respectively. The X was a rather recent ancient specimen of admixed basal Eurasian ancestry:

Levant pre-Neolithic Natufian (A); North Africa Iberomaurusian (B) Caucasus Kotias hunter-gatherer (C); Caucasus Satsurblia hunter-gatherer (D); and Iranian Zagros (E) farmer. The bullet identifies significantly negative values (Z -score < -3). All the tested samples were modern populations.

Table S1: Modern samples used in this study.

Country	Region	N. of Samples	Latitude	Longitude	Reference
Armenia	Caucasus	19	40.11	44.31	Behar et al. (2010) doi: 10.1038/nature09103 and Yunusbayev et al. (2012) doi:10.1093/molbev/msr221
Bangladesh	South Asia	87	23.42	90.21	1000 Genomes Project Consortium (2015) doi:10.1038/nature15393
Bedouin	Levant	48	30.5	34.91	Patterson et al. (2012) doi: 10.1534/genetics.112.145037 and Lazaridis et al. (2014) doi: 10.1038/nature13673
China Beijing	East Asia	103	39.55	116.23	1000 Genomes Project Consortium (2015) doi: 10.1038/nature15393
China Xishuangbanna	East Asia	99	22	100.48	1000 Genomes Project Consortium (2015) doi: 10.1038/nature15393
Druze Israel	Levant	47	32.57	35.1	Patterson et al. (2012) doi: 10.1534/genetics.112.145037; Haber et al. (2016) doi: 10.1038/ejhg.2015.206 and Lazaridis et al. (2014) doi: 10.1038/nature13673
Finland	North Europe	100	60.1	24.56	1000 Genomes Project Consortium (2015) doi: 10.1038/nature15393
France	West Europe	24	48.51	2.21	Patterson et al. (2012) doi: 10.1534/genetics.112.145037 and Lazaridis et al. (2014) doi: 10.1038/nature13673
Gambia	West Africa	113	13.28	-16.36	1000 Genomes Project Consortium (2015) doi: 10.1038/nature15393
Georgia	Caucasus	20	41.43	44.47	Yunusbayev et al. (2012) doi:10.1093/molbev/msr221 and Behar et al. (2010) doi: 10.1038/nature09103
India Andhra Pradesh	South Asia	103	16.5	80.64	1000 Genomes Project Consortium (2015) doi: 10.1038/nature15393
India Gujarati	South Asia	106	23.13	72.41	1000 Genomes Project Consortium (2015) doi: 10.1038/nature15393
Iran	Iran	100	35.41	51.25	Fernandes et al. (2019) doi:10.1093/molbev/msz005; Behar et al. (2013) doi:10.3378/027.085.0604 and Yunusbayev et al. (2015) doi: 10.1371/journal.pgen.1005068
Italy	South Europe	108	43.46	11.15	1000 Genomes Project Consortium (2015) doi: 10.1038/nature15393
Japan	East Asia	105	35.41	139.46	1000 Genomes Project Consortium (2015) doi: 10.1038/nature15393
Jordan	Levant	20	31.57	35.56	Patterson et al. (2012) doi: 10.1534/genetics.112.145037 and Lazaridis et al. (2014) doi: 10.1038/nature13673
Kenya	East Africa	111	0.37	34.46	1000 genomes Project Consortium (2015) doi: 10.1038/nature15393
Lebanon	Levant	7	33.54	35.32	Behar et al. (2010) doi: 10.1038/nature09103
Lezgins	Caucasus	18	43.06	46.53	Behar et al. (2010) doi: 10.1038/nature09103 and Behar et al. (2013) doi:10.3378/027.085.0604
Nigeria Yoruba	West Africa	110	7.23	3.55	1000 Genomes Project Consortium (2015) doi: 10.1038/nature15393
Oman	Arabian Peninsula	100	23.36	58.33	Fernandes et al (2019) doi:10.1093/molbev/msz005
Pakistan Lahore	South Asia	97	31.32	74.2	1000 Genomes Project Consortium (2015) doi: 10.1038/nature15393
Palestina WestBank	Levant	51	31.47	35.13	Patterson et al. (2012) doi: 10.1534/genetics.112.145037 and Lazaridis et al. (2014) doi: 10.1038/nature13673
Romania	Balkans	16	44.25	26.06	Behar et al. (2010) doi: 10.1038/nature09103
Saudi Arabia	Arabian	120	24.39	46.46	Fernandes et al. (2019) doi:10.1093/molbev/msz005

	Peninsula				
Sierra Leone	West Africa	86	8.29	-13.14	1000 Genomes Project Consortium (2015) doi: 10.1038/nature15393
Spain	Southwest Europe	107	40.26	-3.42	1000 Genomes Project Consortium (2015) doi: 10.1038/nature15393
Sri Lanka	South Asia	105	6.56	79.52	1000 Genomes Project Consortium (2015) doi: 10.1038/nature15393
Syria	Levant	16	33.3	36.18	Behar et al. (2010) doi: 10.1038/nature09103
Turkey	Anatolia	19	39.56	32.52	Behar et al. (2010) doi: 10.1038/nature09103
UAE	Arabian Peninsula	120	25.15	55.17	Fernandes et al. (2019) doi:10.1093/molbev/msz005
UK	Northwest Europe	93	51.3	-0.7	1000 Genomes Project Consortium (2015) doi: 10.1038/nature15393
Vietnam	South Asia	101	10.48	106.39	1000 Genomes Project Consortium (2015) doi: 10.1038/nature15393
Yemen	Arabian Peninsula	61	15.2	44.12	Fernandes et al. (2019) doi:10.1093/molbev/msz005

Table S2: Ancient samples used in this study.

SampleID	Group ID	Country	Time Period	Average of 95.4% date range in calBP (defined as 1950 CE)	Sex	Latitude	Longitude	Publication	Analysis
AfontovaGora3_d	Russia_LUP	Russia	Palaeolithic	17930	F	56.02	92.87	Fu et al. (2016) doi: 10.1038/nature17993	PCA, Admixture
AH1.SG	Zagros_N	Iran	Neolithic	9900	F	34.19	48.37	Broushaki et al. (2016) doi: 10.1126/science.aaf7943	PCA, Admixture
AH2.SG	Zagros_N	Iran	Neolithic	9931	M	34.19	48.37	Broushaki et al. (2016) doi: 10.1126/science.aaf7943	PCA, Admixture
AH4.SG	Zagros_N	Iran	Neolithic	9930	F	34.19	48.37	Broushaki et al. (2016) doi: 10.1126/science.aaf7943	PCA, Admixture,
ANI159-ANI181	Balkans_N	Bulgaria	Neolithic	6571	M	43.21	27.86	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
ANI160	Balkans_N	Bulgaria	Neolithic	6550	M	43.21	27.86	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
ANI163	Balkans_N	Bulgaria	Neolithic	6577	F	43.21	27.86	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
atp002.SG	SWEurope_C	Spain	Copper Age	4740	M	42.35	-3.52	Valdiosera et al. (2018) doi: 10.1073/pnas.1717762115	PCA, Admixture,
atp005.SG	SWEurope_N	Spain	Neolithic	7074	M	42.35	-3.52	Valdiosera et al. (2018) doi: 10.1073/pnas.1717762115	PCA, Admixture,
atp12-1420.SG	SWEurope_C	Spain	Copper Age	4896	M	42.35	-3.52	Valdiosera et al. (2018) doi: 10.1073/pnas.1717762115	PCA, Admixture,
baa001.SG	SAfrica_LSA	South Africa	Palaeolithic	1909	M	29.32	31.13	Schlebusch et al. (2017) doi: 10.1126/science.aao6266	PCA, Admixture,
bab001.SG	SAfrica_LSA	South Africa	Palaeolithic	2041	M	29.32	31.13	Schlebusch et al. (2017) doi: 10.1126/science.aao6266	PCA, Admixture,
Bar31.SG	Anatolia_N	Turkey	Neolithic	8279	M	40.30	29.57	Hofmanova et al. (2016) doi: 10.1073/pnas.1523951113	PCA, Admixture,
Bar8.SG	Anatolia_N	Turkey	Neolithic	8071	F	40.30	29.57	Hofmanova et al. (2016) doi: 10.1073/pnas.1523951113	PCA, Admixture, NNLS,
Bichon.SG	CEurope_HG	Switzerland	Palaeolithic	13665	M	47.10	6.87	Jones et al. (2015) doi: 10.1038/ncomms9912	PCA, Admixture, NNLS, Right-pop in qpWave and qpAdm (Outgroup)
Bon001.SG	Anatolia_N	Turkey	Neolithic	10032	M	37.75	32.86	Kilinc et al. (2016) doi: 10.1016/j.cub.2016.07.057	PCA, Admixture,
Bon002.SG	Anatolia_N	Turkey	Neolithic	10078	F	37.75	32.86	Kilinc et al. (2016) doi: 10.1016/j.cub.2016.07.057	PCA, Admixture,
Bon004.SG	Anatolia_N	Turkey	Neolithic	10076	M	37.75	32.86	Kilinc et al. (2016) doi: 10.1016/j.cub.2016.07.057	PCA, Admixture,
BOT14.SG	CAsia_Botai_EN	Kazakhstan	Neolithic	5264	M	53.31	67.65	Damgaard et al. (2018) doi: 10.1126/science.aar7711	PCA, Admixture,
BOT15.SG	CAsia_Botai_EN	Kazakhstan	Neolithic	5135	M	53.31	67.65	Damgaard et al. (2018) doi: 10.1126/science.aar7711	PCA, Admixture,
BOT2016.SG	CAsia_Botai_EN	Kazakhstan	Neolithic	5450	F	53.31	67.65	Damgaard et al. (2018) doi: 10.1126/science.aar7711	PCA, Admixture,
c40331.SG	SWEurope_N	Spain	Neolithic	5650	M	37.36	-4.25	Valdiosera et al. (2018) doi: 10.1073/pnas.1717762115	PCA, Admixture,
CabecoArruda117B.SG	SWEurope_N	Portugal	Neolithic	5050	M	39.11	-8.66	Martiniano et al. (2017) doi: 10.1371/journal.pgen.1006852	PCA, Admixture,

CabecoArruda122A.SG	SWEurope_N	Portugal	Neolithic	5050	M	39.11	-8.66	Martiniano et al. (2017) doi: 10.1371/journal.pgen.1006852	PCA, Admixture,
CB13.SG	SWEurope_N	Spain	Neolithic	7348	F	41.37	1.89	Olalde et al. (2015) doi: 10.1093/molbev/msv181	PCA, Admixture,
cha001.SG	SAfrica_LSA_IA	South Africa	Iron Age	365	F	29.09	29.33	Schlebusch et al. (2017) doi: 10.1126/science.aao6266	PCA, Admixture,
CovaMoura364.SG	SWEurope_N	Portugal	Neolithic	4900	M	38.75	-9.22	Martiniano et al. (2017) doi: 10.1371/journal.pgen.1006852	PCA, Admixture,
CovaMoura9B.SG	SWEurope_N	Portugal	Neolithic	4900	F	38.75	-9.22	Martiniano et al. (2017) doi: 10.1371/journal.pgen.1006852	PCA, Admixture,
DA38.SG	CAsia_XiongNu_WE	Mongolia	Historical or Others	2152	F	49.27	101.72	Damgaard et al. (2018) doi:10.1038/s41586-018-0094-2	Right-pop in qpWave and qpAdm (Outgroup),
DA39.SG	CAsia_XiongNu	Mongolia	Historical or Others	1990	M	48.02	101.35	Damgaard et al. (2018) doi:10.1038/s41586-018-0094-2	Right-pop in qpWave and qpAdm (Outgroup),
DA43.SG	CAsia_XiongNu	Mongolia	Historical or Others	2100	M	42.53	105.18	Damgaard et al. (2018) doi:10.1038/s41586-018-0094-2	Right-pop in qpWave and qpAdm (Outgroup),
DA45.SG	CAsia_XiongNu	Mongolia	Historical or Others	2062	M	42.53	105.18	Damgaard et al. (2018) doi:10.1038/s41586-018-0094-2	Right-pop in qpWave and qpAdm (Outgroup),
DolmenAnsiao96B.SG	SWEurope_N	Portugal	Neolithic	5450	M	39.91	-8.44	Martiniano et al. (2017) doi: 10.1371/journal.pgen.1006852	PCA, Admixture,
ela001.SG	SAfrica_LSA_IA	South Africa	Iron Age	493	F	32.32	18.32	Schlebusch et al. (2017) doi: 10.1126/science.aao6266	PCA, Admixture,
ElMiron_d	SWEurope_LUP	Spain	Palaeolithic	18720	F	43.26	-3.45	Fu et al. (2016) doi: 10.1038/nature17993	PCA, Admixture, NNLS,
GoyetQ116-1_published	WEurope_EUP	Belgium	Palaeolithic	34795	M	50.26	4.28	Fu et al. (2016) doi: 10.1038/nature17993	PCA, Admixture,
HohleFels49_published_d	CEurope_LUP	Germany	Palaeolithic	15130	M	48.22	9.45	Fu et al. (2016) doi: 10.1038/nature17993	PCA, Admixture,
I0017.SG	NEurope_HG	Sweden	Palaeolithic	7626	M	58.54	15.05	Lazaridis et al. (2014) doi: 10.1038/nature13673	PCA, Admixture,
I0061	NWRussia_HG	Russia	Palaeolithic	8280	M	61.65	35.65	Mathieson et al. (2015) doi: 10.1038/nature16152 (1240k of same sample with 390k in Haak, Lazaridis, et al. (2015) doi: 10.1038/nature14317)	PCA, Admixture, Left-pop in qpWave and qpAdm for Basal Eurasia,
I0070	SEEurope_Minoan_BA	Greece	Bronze Age	4000	M	35.08	25.83	Lazaridis et al. (2017) doi: 10.1038/nature23310	PCA, Admixture,
I0071	SEEurope_Minoan_BA	Greece	Bronze Age	4000	F	35.08	25.83	Lazaridis et al. (2017) doi: 10.1038/nature23310	PCA, Admixture,
I0073	SEEurope_Minoan_BA	Greece	Bronze Age	4000	M	35.08	25.83	Lazaridis et al. (2017) doi: 10.1038/nature23310	PCA, Admixture,
I0074	SEEurope_Minoan_BA	Greece	Bronze Age	4000	F	35.08	25.83	Lazaridis et al. (2017) doi: 10.1038/nature23310	PCA, Admixture,
I0100	CEurope_LBK_EN	Germany	Neolithic	6977	F	51.90	11.05	Lipson et al. (2017) doi: 10.1038/nature24476 (supplement of Mathieson et al. (2015) doi: 10.1038/nature16152, which itself was supplement of Haak, Lazaridis, et al. (2015) doi: 10.1038/nature14317)	PCA, Admixture, Right-pop in qpWave and qpAdm (Outgroup),
I0103	CEurope_LN	Germany	Neolithic	4473	F	51.42	11.68	Mathieson et al. (2015) doi: 10.1038/nature16152 (1240k of same sample with 390k in Haak, Lazaridis, et al. (2015) doi: 10.1038/nature14317)	PCA, Admixture, Right-pop in qpWave and qpAdm (Outgroup),
I0112	CEurope_BellBeaker_BA	Germany	Bronze Age	4250	F	51.79	11.14	Mathieson et al. (2015) doi: 10.1038/nature16152 (1240k of same sample with 390k in Haak, Lazaridis, et al. (2015) doi: 10.1038/nature14317)	PCA, Admixture, NNLS, Right-pop in qpWave and qpAdm (Outgroup),
I0231_published	RussiaSteppe_EMBA	Russia	Bronze Age	4800	M	52.71	49.47	Mathieson et al. (2015) doi: 10.1038/nature16152 (1240k of same with 390k in Haak, Lazaridis, et al. (2015) doi: 10.1038/nature14317)	PCA, Admixture, NNLS,
I0247	RussiaSteppe_IA	Russia	Iron Age	2239	M	52.43	51.16	Mathieson et al. (2015) doi: 10.1038/nature16152	PCA, Admixture,
I0405	SWEurope_N	Spain	Neolithic	5700	M	41.25	-2.33	Mathieson et al. (2015) doi: 10.1038/nature16152 (1240k of same sample with 390k in Haak, Lazaridis, et al. (2015) doi: 10.1038/nature14317)	PCA, Admixture,

									10.1038/nature14317)	
I0406	SWEurope_N	Spain	Neolithic	5700	M	41.25	-2.33		Mathieson et al. (2015) doi: 10.1038/nature16152 (1240k of same sample with 390k in Haak, Lazaridis, et al. (2015) doi: 10.1038/nature14317)	PCA, Admixture,
I0407	SWEurope_N	Spain	Neolithic	5700	F	41.25	-2.33		Mathieson et al. (2015) doi: 10.1038/nature16152 (1240k of same sample with 390k in Haak, Lazaridis, et al. (2015) doi: 10.1038/nature14317)	PCA, Admixture,
I0408	SWEurope_N	Spain	Neolithic	5727	F	41.25	-2.33		Mathieson et al. (2015) doi: 10.1038/nature16152 (1240k of same sample with 390k in Haak, Lazaridis, et al. (2015) doi: 10.1038/nature14317)	PCA, Admixture,
I0409	SWEurope_N	Spain	Neolithic	7215	F	42.50	0.50		Mathieson et al. (2015) doi: 10.1038/nature16152 (1240k of same sample with 390k in Haak, Lazaridis, et al. (2015) doi: 10.1038/nature14317)	PCA, Admixture,
I0410	SWEurope_N	Spain	Neolithic	7130	M	42.50	0.50		Mathieson et al. (2015) doi: 10.1038/nature16152 (1240k of same sample with 390k in Haak, Lazaridis, et al. (2015) doi: 10.1038/nature14317)	PCA, Admixture,
I0411	SWEurope_N	Spain	Neolithic	7131	M	42.50	0.50		Mathieson et al. (2015) doi: 10.1038/nature16152 (1240k of same sample with 390k in Haak, Lazaridis, et al. (2015) doi: 10.1038/nature14317)	PCA, Admixture,
I0412	SWEurope_N	Spain	Neolithic	7144	M	42.50	0.50		Mathieson et al. (2015) doi: 10.1038/nature16152 (1240k of same with 390k in Haak, Lazaridis, et al. (2015) doi: 10.1038/nature14317)	PCA, Admixture,
I0413	SWEurope_N	Spain	Neolithic	7139	F	42.50	0.50		Mathieson et al. (2015) doi: 10.1038/nature16152 (1240k of same sample with 390k in Haak, Lazaridis, et al. (2015) doi: 10.1038/nature14317)	PCA, Admixture,
I0443	RussiaSteppe_EMBA	Russia	Bronze Age	4950	M	53.38	50.39		Mathieson et al. (2015) doi: 10.1038/nature16152 (1240k of same sample with 390k in Haak, Lazaridis, et al. (2015) doi: 10.1038/nature14317)	PCA, Admixture,
I0585	SWEurope_HG	Spain	Palaeolithic	7815	M	42.91	-5.38		Mathieson et al. (2015) doi: 10.1038/nature16152 (1240k of same sample with shotgun in Olalde et al. (2014) doi: 10.1038/nature12960)	PCA, Admixture, NNLS,
I0589_all	SEAfrica_MIA	Tanzania	Iron Age	1335	F	-6.40	39.50		Skoglund et al. (2017) doi: 10.1016/j.cell.2017.08.049	PCA, Admixture,
I0595	EAFrica_MIA_LIA	Kenya	Iron Age	410	M	-3.70	39.70		Skoglund et al. (2017) doi: 10.1016/j.cell.2017.08.049	PCA, Admixture,
I0626_all	SEAsia_N	Vietnam	Neolithic	3750	M	20.13	105.98		Lipson et al. (2018) doi: 10.1126/science.aat3188	PCA, Admixture,
I0627_all	SEAsia_N	Vietnam	Neolithic	3964	F	20.13	105.98		Lipson et al. (2018) doi: 10.1126/science.aat3188	PCA, Admixture,
I0676	Balkans_N	Macedonia	Neolithic	7807	M	41.90	21.35		Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
I0679_d	Balkans_N	Bulgaria	Neolithic	7622	F	42.02	25.60		Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
I0698_published	Balkans_N	Bulgaria	Neolithic	7900	M	42.10	25.75		Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
I0700	Balkans_N	Bulgaria	Neolithic	7934	M	43.98	26.40		Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
I0704_published	Balkans_N	Bulgaria	Neolithic	7889	F	43.16	25.88		Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
I0706	Balkans_N	Bulgaria	Neolithic	7905	M	43.16	25.88		Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
I0707	Anatolia_N	Turkey	Neolithic	8092	F	40.30	29.57		Mathieson et al. (2015) doi: 10.1038/nature16152	PCA, Admixture,
I0708	Anatolia_N	Turkey	Neolithic	8097	M	40.30	29.57		Mathieson et al. (2015) doi: 10.1038/nature16152	PCA, Admixture,
I0709	Anatolia_N	Turkey	Neolithic	8086	M	40.30	29.57		Mathieson et al. (2015) doi: 10.1038/nature16152	PCA, Admixture,

I0723	Anatolia_N	Turkey	Neolithic	7870	M	40.26	29.65	Mathieson et al. (2015) doi: 10.1038/nature16152	PCA, Admixture,
I0724	Anatolia_N	Turkey	Neolithic	7950	M	40.26	29.65	Mathieson et al. (2015) doi: 10.1038/nature16152	PCA, Admixture,
I0725	Anatolia_N	Turkey	Neolithic	7950	F	40.26	29.65	Mathieson et al. (2015) doi: 10.1038/nature16152	PCA, Admixture,
I0726	Anatolia_N	Turkey	Neolithic	7950	F	40.26	29.65	Mathieson et al. (2015) doi: 10.1038/nature16152	PCA, Admixture,
I0727	Anatolia_N	Turkey	Neolithic	7950	M	40.26	29.65	Mathieson et al. (2015) doi: 10.1038/nature16152	PCA, Admixture,
I0736	Anatolia_N	Turkey	Neolithic	8300	F	40.30	29.57	Mathieson et al. (2015) doi: 10.1038/nature16152	PCA, Admixture,
I0744	Anatolia_N	Turkey	Neolithic	8273	M	40.30	29.57	Mathieson et al. (2015) doi: 10.1038/nature16152	PCA, Admixture,
I0745	Anatolia_N	Turkey	Neolithic	8251	M	40.30	29.57	Mathieson et al. (2015) doi: 10.1038/nature16152	PCA, Admixture,
I0746	Anatolia_N	Turkey	Neolithic	7930	M	40.30	29.57	Mathieson et al. (2015) doi: 10.1038/nature16152	PCA, Admixture,
I0854	Anatolia_N	Turkey	Neolithic	8106	F	40.30	29.57	Mathieson et al. (2015) doi: 10.1038/nature16152	PCA, Admixture,
I0861	Natufian	Israel	Palaeolithic	12750	M	32.65	35.07	Lazaridis et al. (2016) doi: 10.1038/nature19310	PCA, Admixture,
I0867	Levant_PPNB	Israel	Neolithic	8700	M	31.79	35.17	Lazaridis et al. (2016) doi: 10.1038/nature19310	PCA, Admixture, NNLS, Left-pop in qpWave and qpAdm,
I1048	SEAfrica_LSA	Tanzania	Palaeolithic	1358	F	-4.90	39.60	Skoglund et al. (2017) doi: 10.1016/j.cell.2017.08.049	PCA, Admixture,
I1072	Natufian	Israel	Palaeolithic	12750	M	32.65	35.07	Lazaridis et al. (2016) doi: 10.1038/nature19310	PCA, Admixture, NNLS, Left-pop in qpWave and qpAdm, Left-pop in qpWave and qpAdm for Basal Eurasia, f_4 -statistics, f_4 -statistics for Neanderthal
I1096	Anatolia_N	Turkey	Neolithic	8300	M	40.30	29.57	Mathieson et al. (2015) doi: 10.1038/nature16152	PCA, Admixture,
I1097	Anatolia_N	Turkey	Neolithic	8288	M	40.30	29.57	Mathieson et al. (2015) doi: 10.1038/nature16152	PCA, Admixture,
I1098	Anatolia_N	Turkey	Neolithic	8288	F	40.30	29.57	Mathieson et al. (2015) doi: 10.1038/nature16152	PCA, Admixture,
I1099	Anatolia_N	Turkey	Neolithic	8300	M	40.30	29.57	Mathieson et al. (2015) doi: 10.1038/nature16152	PCA, Admixture,
I1100	Anatolia_N	Turkey	Neolithic	8300	F	40.30	29.57	Mathieson et al. (2015) doi: 10.1038/nature16152	PCA, Admixture,
I1101	Anatolia_N	Turkey	Neolithic	8300	M	40.30	29.57	Mathieson et al. (2015) doi: 10.1038/nature16152	PCA, Admixture,
I1102	Anatolia_N	Turkey	Neolithic	8300	M	40.30	29.57	Mathieson et al. (2015) doi: 10.1038/nature16152	PCA, Admixture,
I1103	Anatolia_N	Turkey	Neolithic	8300	M	40.30	29.57	Mathieson et al. (2015) doi: 10.1038/nature16152	PCA, Admixture,
I1108	Balkans_N	Bulgaria	Neolithic	7875	M	43.98	26.40	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
I1109	Balkans_N	Bulgaria	Neolithic	7635	F	43.98	26.40	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
I1113	Balkans_N	Bulgaria	Neolithic	7983	F	43.98	26.40	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
I1137_all	SEAsia_N	Vietnam	Neolithic	3764	M	20.13	105.98	Lipson et al. (2018) doi: 10.1126/science.aat3188	PCA, Admixture,
I1290	Zagros_N	Iran	Neolithic	9846	F	34.45	48.12	Lazaridis et al. (2016) doi: 10.1038/nature19310	PCA, Admixture,
I1293_all	Iran_EpiPalaeolithic	Iran	Palaeolithic	10800	M	35.59	53.50	Lazaridis et al. (2016) doi: 10.1038/nature19310	PCA, Admixture,

I1295	Balkans_N	Bulgaria	Neolithic	7752	M	43.98	26.40	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
I1296_published	Balkans_N	Bulgaria	Neolithic	7675	M	43.98	26.40	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
I1297	Balkans_N	Bulgaria	Neolithic	7817	F	43.98	26.40	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
I1407	Caucasus_C	Armenia	Copper Age	5875	M	39.73	45.20	Lazaridis et al. (2016) doi: 10.1038/nature19310	PCA, Admixture,
I1414_published	Levant_PPNB	Jordan	Neolithic	10050	M	31.99	35.98	Lazaridis et al. (2016) doi: 10.1038/nature19310	PCA, Admixture,
I1415_published	Levant_PPNB	Jordan	Neolithic	9875	M	31.99	35.98	Lazaridis et al. (2016) doi: 10.1038/nature19310	PCA, Admixture,
I1499	CEurope_MN	Hungary	Neolithic	7060	F	48.52	21.17	Mathieson et al. (2015) doi: 10.1038/nature16152 (capture of same sample shotgunned in Gamba et al. (2014) doi: 10.1038/ncomms6257)	PCA, Admixture, Right-pop in qpWave and qpAdm (Outgroup),
I1580	Anatolia_N	Turkey	Neolithic	8195	F	40.30	29.57	Mathieson et al. (2015) doi: 10.1038/nature16152	PCA, Admixture,
I1581	Anatolia_N	Turkey	Neolithic	8254	F	40.30	29.57	Mathieson et al. (2015) doi: 10.1038/nature16152	PCA, Admixture,
I1583	Anatolia_N	Turkey	Neolithic	8281	M	40.30	29.57	Mathieson et al. (2015) doi: 10.1038/nature16152	PCA, Admixture,
I1584	Anatolia_C	Turkey	Copper Age	5776	F	40.30	29.57	Lazaridis et al. (2016) doi: 10.1038/nature19310	PCA, Admixture,
I1633	Caucasus_EBA	Armenia	Bronze Age	4465	F	40.65	45.12	Lazaridis et al. (2016) doi: 10.1038/nature19310	PCA, Admixture, NNLS, Left-pop in qpWave and qpAdm,
I1656	Caucasus_MBA	Armenia	Bronze Age	3402	F	40.38	43.94	Lazaridis et al. (2016) doi: 10.1038/nature19310	PCA, Admixture, NNLS,
I1658	Caucasus_EBA	Armenia	Bronze Age	5170	F	40.39	43.89	Lazaridis et al. (2016) doi: 10.1038/nature19310	PCA, Admixture,
I1671	Zagros_N	Iran	Neolithic	7698	M	34.50	47.96	Lazaridis et al. (2016) doi: 10.1038/nature19310	PCA, Admixture,
I1679	Levant_PPNC	Jordan	Neolithic	8800	F	31.99	35.98	Lazaridis et al. (2016) doi: 10.1038/nature19310	PCA, Admixture,
I1680	SEAsia_IA	Cambodia	Iron Age	1810	M	10.99	104.98	Lipson et al. (2018) doi: 10.1126/science.aat3188	PCA, Admixture,
I1685_published	Natufian	Israel	Palaeolithic	12750	M	32.65	35.07	Lazaridis et al. (2016) doi: 10.1038/nature19310	PCA, Admixture,
I1699	Levant_PPNC	Jordan	Neolithic	8700	F	31.99	35.98	Lazaridis et al. (2016) doi: 10.1038/nature19310	PCA, Admixture,
I1700_published	Levant_PPNB	Jordan	Neolithic	10050	M	31.99	35.98	Lazaridis et al. (2016) doi: 10.1038/nature19310	PCA, Admixture,
I1704	Levant_PPNB	Jordan	Neolithic	9202	F	31.99	35.98	Lazaridis et al. (2016) doi: 10.1038/nature19310	PCA, Admixture,
I1705	Levant_EBA	Jordan	Bronze Age	4032	M	31.99	35.98	Lazaridis et al. (2016) doi: 10.1038/nature19310	PCA, Admixture, NNLS, Left-pop in qpWave and qpAdm,
I1706	Levant_EBA	Jordan	Bronze Age	4345	F	31.99	35.98	Lazaridis et al. (2016) doi: 10.1038/nature19310	PCA, Admixture,
I1707	Levant_PPNB	Jordan	Neolithic	9582	M	31.99	35.98	Lazaridis et al. (2016) doi: 10.1038/nature19310	PCA, Admixture,
I1710	Levant_PPNB	Jordan	Neolithic	9580	M	31.99	35.98	Lazaridis et al. (2016) doi: 10.1038/nature19310	PCA, Admixture,
I1727	Levant_PPNB	Jordan	Neolithic	10050	M	31.99	35.98	Lazaridis et al. (2016) doi: 10.1038/nature19310	PCA, Admixture,
I1730	Levant_EBA	Jordan	Bronze Age	4344	M	31.99	35.98	Lazaridis et al. (2016) doi: 10.1038/nature19310	PCA, Admixture,
I1859_all	SEAsia_N	Vietnam	Neolithic	3766	F	20.13	105.98	Lipson et al. (2018) doi: 10.1126/science.aat3188	PCA, Admixture,

I1945_published	Zagros_N	Iran	Neolithic	9800	M	34.45	48.12	Lazaridis et al. (2016) doi: 10.1038/nature19310	PCA, Admixture,
I1949_published	Zagros_N	Iran	Neolithic	10052	M	34.45	48.12	Lazaridis et al. (2016) doi: 10.1038/nature19310	PCA, Admixture,
I1972	SWEurope_N	Spain	Neolithic	6710	F	42.63	-3.12	Lipson et al. (2017) doi: 10.1038/nature24476	PCA, Admixture,
I1979	SEurope_BellBeaker_BA	Italy	Bronze Age	4015	F	44.78	10.29	Olalde et al. (2018) doi: 10.1038/nature25738	PCA, Admixture,
I2158_published	SEurope_HG	Italy	Palaeolithic	14275	F	37.93	12.33	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
I2199	SWEurope_N	Spain	Neolithic	7074	F	42.63	-3.12	Lipson et al. (2017) doi: 10.1038/nature24476	PCA, Admixture,
I2215_published	Balkans_N	Bulgaria	Neolithic	7980	M	43.98	26.40	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
I2216_published	Balkans_N	Bulgaria	Neolithic	7845	F	43.98	26.40	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
I2318	SEurope_Peloponnese_N	Greece	Neolithic	5945	F	37.42	23.13	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
I2477	SEurope_BellBeaker_BA	Italy	Bronze Age	4015	F	44.78	10.29	Olalde et al. (2018) doi: 10.1038/nature25738	PCA, Admixture, NNLS,
I2478	SEurope_BellBeaker_BA	Italy	Bronze Age	4018	M	44.78	10.29	Olalde et al. (2018) doi: 10.1038/nature25738	PCA, Admixture,
I2495	Anatolia_EBA	Turkey	Bronze Age	4377	M	37.92	30.71	Lazaridis et al. (2017) doi: 10.1038/nature23310	PCA, Admixture, NNLS,
I2497_all	SEAsia_BA	Vietnam	Bronze Age	2000	F	19.80	105.80	Lipson et al. (2018) doi: 10.1126/science.aat3188	PCA, Admixture
I2499	Anatolia_EBA	Turkey	Bronze Age	4604	F	37.92	30.71	Lazaridis et al. (2017) doi: 10.1038/nature23310	PCA, Admixture
I2521	Balkans_N	Bulgaria	Neolithic	7505	M	43.16	25.88	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture
I2526	Balkans_N	Bulgaria	Neolithic	7336	F	43.14	25.61	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture
I2529_published	Balkans_N	Bulgaria	Neolithic	7601	M	42.10	25.75	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture
I2683	Anatolia_EBA	Turkey	Bronze Age	4494	F	37.92	30.71	Lazaridis et al. (2017) doi: 10.1038/nature23310	PCA, Admixture,
I2731_all	SEAsia_N	Vietnam	Neolithic	3717	M	20.13	105.98	Lipson et al. (2018) doi: 10.1126/science.aat3188	PCA, Admixture,
I2947	SEAsia_N	Vietnam	Neolithic	3750	F	20.13	105.98	Lipson et al. (2018) doi: 10.1126/science.aat3188	PCA, Admixture,
I2948_all	SEAsia_BA	Vietnam	Bronze Age	1948	M	19.80	105.80	Lipson et al. (2018) doi: 10.1126/science.aat3188	PCA, Admixture,
I2966_all	SEAfrica_HG	Malawi	Palaeolithic	7950	M	-11.66	33.64	Skoglund et al. (2017) doi: 10.1016/j.cell.2017.08.049	PCA, Admixture,
I2967_all	SEAfrica_HG	Malawi	Palaeolithic	8065	F	-11.66	33.64	Skoglund et al. (2017) doi: 10.1016/j.cell.2017.08.049	PCA, Admixture,
I3433	Balkans_N	Croatia	Neolithic	7814	F	43.59	16.65	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
I3498	Balkans_N	Croatia	Neolithic	7698	M	45.34	18.70	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
I3499	Balkans_N	Croatia	Neolithic	4725	M	45.34	18.70	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
I3708	SEurope_Peloponnese_N	Greece	Neolithic	6550	F	36.64	22.38	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
I3709	SEurope_Peloponnese_N	Greece	Neolithic	5847	F	36.64	22.38	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
I3726_all	SEAfrica_N	Tanzania	Neolithic	3079	F	-4.26	35.32	Skoglund et al. (2017) doi: 10.1016/j.cell.2017.08.049	PCA, Admixture,

I3879	Balkans_N	Bulgaria	Neolithic	7828	M	43.98	26.40	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
I3920	SEEurope_Peloponnese_N	Greece	Neolithic	5770	F	36.64	22.38	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
I3947	Balkans_N	Croatia	Neolithic	7836	M	43.59	16.65	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
I3948	Balkans_N	Croatia	Neolithic	7860	M	43.59	16.65	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
I4167	Balkans_N	Croatia	Neolithic	6624	M	45.34	18.70	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
I4168	Balkans_N	Croatia	Neolithic	6600	F	45.34	18.70	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
I4421_all_published	SEAfrica_LSA	Malawi	Palaeolithic	5200	F	-14.38	33.82	Skoglund et al. (2017) doi: 10.1016/j.cell.2017.08.049	PCA, Admixture,
I4426_all_published	SEAfrica_LSA	Malawi	Palaeolithic	2517	F	-10.79	33.77	Skoglund et al. (2017) doi: 10.1016/j.cell.2017.08.049	PCA, Admixture,
I4427_all_published	SEAfrica_LSA	Malawi	Palaeolithic	6061	M	-10.79	33.77	Skoglund et al. (2017) doi: 10.1016/j.cell.2017.08.049	PCA, Admixture,
I4468_all_published	SEAfrica_LSA	Malawi	Palaeolithic	6087	M	-10.79	33.77	Skoglund et al. (2017) doi: 10.1016/j.cell.2017.08.049	PCA, Admixture,
I4930	SEurope_C	Italy	Copper Age	4721	F	37.73	12.96	Olalde et al. (2018) doi: 10.1038/nature25738	PCA, Admixture,
I5071	Balkans_N	Croatia	Neolithic	7571	F	45.37	13.56	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
I5072	Balkans_N	Croatia	Neolithic	7551	M	45.37	13.56	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
I5077	Balkans_N	Croatia	Neolithic	7026	M	45.55	18.75	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
I5078	Balkans_N	Croatia	Neolithic	6569	M	45.55	18.75	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture, NNLS,
I5079	Balkans_N	Croatia	Neolithic	5485	F	45.49	17.64	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
I5235	Balkans_HG	Serbia	Palaeolithic	10835	M	44.60	22.01	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
I5236	Balkans_HG	Serbia	Palaeolithic	10008	M	44.60	22.01	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
I5239	Balkans_HG	Serbia	Palaeolithic	10333	F	44.60	22.01	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
I5240	Balkans_HG	Serbia	Palaeolithic	10805	M	44.60	22.01	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
I5241	Balkans_HG	Serbia	Palaeolithic	11196	F	44.60	22.01	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
I5242	Balkans_HG	Serbia	Palaeolithic	10530	F	44.60	22.01	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture, NNLS,
I5244	Balkans_HG	Serbia	Palaeolithic	10785	F	44.60	22.01	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
I5427	SEEurope_Peloponnese_N	Greece	Neolithic	7892	F	36.64	22.38	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
I5773_published	Balkans_HG	Serbia	Palaeolithic	10040	M	44.53	22.05	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
I6601	SWEurope_C	Portugal	Copper Age	4250	M	39.09	-9.29	Olalde et al. (2018) doi: 10.1038/nature25738	PCA, Admixture,
I9005	SEEurope_Minoan_BA	Greece	Bronze Age	4000	F	35.08	25.83	Lazaridis et al. (2017) doi: 10.1038/nature23310	PCA, Admixture,
I9006	SEEurope_Mycenaean_BA	Greece	Bronze Age	3287	F	37.97	23.50	Lazaridis et al. (2017) doi: 10.1038/nature23310	PCA, Admixture,
I9010	SEEurope_Mycenaean_BA	Greece	Bronze Age	3250	F	37.50	23.45	Lazaridis et al. (2017) doi: 10.1038/nature23310	PCA, Admixture,

I9028.SG	SAfrica_HG	South Africa	Palaeolithic	2103	M	-32.76	18.03	Skoglund et al. (2017) doi: 10.1016/j.cell.2017.08.049	PCA, Admixture,
I9033	SEurope_Mycenaean_BA	Greece	Bronze Age	3298	F	36.92	21.70	Lazaridis et al. (2017) doi: 10.1038/nature23310	PCA, Admixture,
I9041	SEurope_Mycenaean_BA	Greece	Bronze Age	3250	M	37.50	23.45	Lazaridis et al. (2017) doi: 10.1038/nature23310	PCA, Admixture,
I9133.SG	SAfrica_LSA	South Africa	Palaeolithic	1970	M	-31.98	18.52	Skoglund et al. (2017) doi: 10.1016/j.cell.2017.08.049	PCA, Admixture,
I9134.SG	SAfrica_LSA	South Africa	Palaeolithic	1199	F	-32.81	17.95	Skoglund et al. (2017) doi: 10.1016/j.cell.2017.08.049	PCA, Admixture,
IAM.4	NAfrica_EN	Morocco	Neolithic	7021	M	33.82	-6.07	Fregel et al. (2018) doi: 10.1073/pnas.1800851115	PCA, Admixture,
IAM.5	NAfrica_EN	Morocco	Neolithic	7125	M	33.82	-6.07	Fregel et al. (2018) doi: 10.1073/pnas.1800851115	PCA, Admixture, Left-pop in qpWave and qpAdm,
IAM.6	NAfrica_EN	Morocco	Neolithic	6870	F	33.82	-6.07	Fregel et al. (2018) doi: 10.1073/pnas.1800851115	PCA, Admixture,
IAM.7	NAfrica_EN	Morocco	Neolithic	5665	M	33.82	-6.07	Fregel et al. (2018) doi: 10.1073/pnas.1800851115	PCA, Admixture,
Iboussiers25-1	WEurope_WHG	France	Palaeolithic	11725	M	44.29	4.46	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
Iboussiers31-2	WEurope_WHG	France	Palaeolithic	11725	M	44.29	4.46	Mathieson et al. (2018) doi: 10.1038/nature25778	PCA, Admixture,
Iceman.SG	SEurope_MN	Italy	Neolithic	5244	M	46.77	10.83	Keller et al. (2012) doi: 10.1038/ncomms1701	PCA, Admixture, NNLS,
In661.WGC	SEAsia_LN_BA_IA	Indonesia	Bronze Age	1872	F	0.59	101.34	McColl et al. (2018) doi: 10.1126/science.aat3628	PCA, Admixture,
In662.SG	SEAsia_LN_BA_IA	Indonesia	Bronze Age	2176	M	0.59	101.34	McColl et al. (2018) doi: 10.1126/science.aat3628	PCA, Admixture,
KEB.1	NAfrica_LN	Morocco	Neolithic	5650	F	34.03	-6.83	Fregel et al. (2018) doi: 10.1073/pnas.1800851115	PCA, Admixture,
KEB.4	NAfrica_LN	Morocco	Neolithic	5650	F	34.03	-6.83	Fregel et al. (2018) doi: 10.1073/pnas.1800851115	PCA, Admixture, Left-pop in qpWave and qpAdm,
KEB.6	NAfrica_LN	Morocco	Neolithic	5650	M	34.03	-6.83	Fregel et al. (2018) doi: 10.1073/pnas.1800851115	PCA, Admixture,
KK1.SG	Kotias_HG/Caucasus_HG	Georgia	Palaeolithic	9720	M	42.28	43.28	Jones et al. (2015) doi: 10.1038/ncomms9912	PCA, Admixture, NNLS, Left-pop in qpWave and qpAdm, Left-pop in qpWave and qpAdm for Basal Eurasia, f_4 -statistics, f_4 -statistics for Neanderthal
Kostenki14	Russia_EUP	Russia	Palaeolithic	37470	M	51.23	39.30	Fu et al. (2016) doi: 10.1038/nature17993	PCA, Admixture, Right-pop in qpWave and qpAdm (Outgroup), Right-pop in qpWave and qpAdm for Basal Eurasia (Outgroup),
kum6.SG	Anatolia_N	Turkey	Neolithic	6682	F	39.95	26.20	Omrak et al. (2016) doi: 10.1016/j.cub.2015.12.019	PCA, Admixture,
La364.SG	SEAsia_LN_BA	Laos	Bronze Age	2976	M	17.81	97.78	McColl et al. (2018) doi: 10.1126/science.aat3628	PCA, Admixture,
La368.SG	SEAsia_HG	Laos	Palaeolithic	7872	M	18.44	104.47	McColl et al. (2018) doi: 10.1126/science.aat3628	PCA, Admixture,
La727.WGC	SEAsia_BA	Laos	Bronze Age	2281	F	17.81	97.78	McColl et al. (2018) doi: 10.1126/science.aat3628	PCA, Admixture,
Loschbour_published.DG	CEurope_HG	Luxembourg	Palaeolithic	8050	M	49.81	6.40	Lazaridis et al. (2014) doi: 10.1038/nature13673	PCA, Admixture, NNLS, Right-pop in qpWave and qpAdm (Outgroup), Left-pop in qpWave and qpAdm for Basal Eurasia, f_4 -statistics, f_4 -statistics for Neanderthal
LugarCanto41.SG	SWEurope_N	Portugal	Neolithic	5950	F	40.78	-7.52	Martiniano et al. (2017) doi: 10.1371/journal.pgen.1006852	PCA, Admixture,
LugarCanto42.SG	SWEurope_N	Portugal	Neolithic	5950	F	40.78	-7.52	Martiniano et al. (2017) doi: 10.1371/journal.pgen.1006852	PCA, Admixture, NNLS,

LugarCanto44.SG	SWEurope_N	Portugal	Neolithic	5950	F	40.78	-7.52	Martiniano et al. (2017) doi: 10.1371/journal.pgen.1006852	PCA, Admixture,
LugarCanto45.SG	SWEurope_N	Portugal	Neolithic	5950	M	40.78	-7.52	Martiniano et al. (2017) doi: 10.1371/journal.pgen.1006852	PCA, Admixture,
M63.SG	SAsia_Mebrak	Nepal	Historical or Others	2125	M	29.00	83.85	Jeong et al. (2016) doi: 10.1073/pnas.1520844113	Right-pop in qpWave and qpAdm (Outgroup),
MA1.SG	Russia_HG	Russia	Palaeolithic	24305	M	52.90	103.50	Raghavan et al. (2013) doi: 10.1038/nature12736	PCA, Admixture, Right-pop in qpWave and qpAdm (Outgroup),
Ma555.SG	SEAsia_Historical	Malaysia	Historical or Others	376	M	5.25	117.00	McCull et al. (2018) doi: 10.1126/science.aat3628	Right-pop in qpWave and qpAdm (Outgroup),
Ma912.SG	SEAsia_LN	Malaysia	Neolithic	2520	M	5.25	102.00	McCull et al. (2018) doi: 10.1126/science.aat3628	PCA, Admixture, Right-pop in qpWave and qpAdm (Outgroup),
mfo001.SG	SAfrica_IA	South Africa	Iron Age	378	F	28.71	30.84	Schlebusch et al. (2017) doi: 10.1126/science.aao6266	PCA, Admixture,
MonteCanelas337A.SG	SWEurope_N	Portugal	Neolithic	4953	M	37.21	-8.55	Martiniano et al. (2017) doi: 10.1371/journal.pgen.1006852	PCA, Admixture,
mota.SG	Mota_EN/Eafrica_EN	Ethiopia	Neolithic	4472	M	6.80	38.21	Llorente et al. (2015) doi: 10.1126/science.aaf3945	PCA, Admixture, Right-pop in qpWave and qpAdm (Outgroup), Left-pop in qpWave and qpAdm for Basal Eurasia,
mur.SG	SWEurope_N	Spain	Neolithic	7136	M	37.54	-4.30	Valdiosera et al. (2018) doi: 10.1073/pnas.1717762115	PCA, Admixture,
new001.SG	SAfrica_IA	South Africa	Iron Age	418	F	27.71	30.00	Schlebusch et al. (2017) doi: 10.1126/science.aao6266	PCA, Admixture,
Ostuni1_d	SEurope_MUP	Italy	Palaeolithic	27620	F	40.73	17.57	Fu et al. (2016) doi: 10.1038/nature17993	PCA, Admixture,
Paglicci133_published	SEurope_MUP	Italy	Palaeolithic	32895	M	41.65	15.61	Fu et al. (2016) doi: 10.1038/nature17993	PCA, Admixture,
RISE487.SG	SEurope_BA	Italy	Bronze Age	5245	M	45.26	10.38	Allentoft et al. (2015) doi: 10.1038/nature14507	PCA, Admixture,
RISE489.SG	SEurope_BA	Italy	Bronze Age	4693	M	45.26	10.38	Allentoft et al. (2015) doi: 10.1038/nature14507	PCA, Admixture,
RISE500.SG	RussiaSteppe_MLBA	Russia	Bronze Age	3550	F	53.46	85.45	Allentoft et al. (2015) doi: 10.1038/nature14507	PCA, Admixture,
RISE505.SG	RussiaSteppe_MLBA	Russia	Bronze Age	3636	F	53.46	85.45	Allentoft et al. (2015) doi: 10.1038/nature14507	PCA, Admixture, NNLS,
RISE552.SG	RussiaSteppe_EMBA	Russia	Bronze Age	4446	M	46.62	43.33	Allentoft et al. (2015) doi: 10.1038/nature14507	PCA, Admixture,
S10.SG	SAsia_Samdzung	Nepal	Historical or Others	1500	M	28.93	83.91	Jeong et al. (2016) doi: 10.1073/pnas.1520844113	Right-pop in qpWave and qpAdm (Outgroup),
S35.SG	SAsia_Samdzung	Nepal	Historical or Others	1500	M	28.93	83.91	Jeong et al. (2016) doi: 10.1073/pnas.1520844113	Right-pop in qpWave and qpAdm (Outgroup),
S41.SG	SAsia_Samdzung	Nepal	Historical or Others	1500	M	28.93	83.91	Jeong et al. (2016) doi: 10.1073/pnas.1520844113	Right-pop in qpWave and qpAdm (Outgroup),
san216.SG	SWEurope_N	Spain	Neolithic	5666	M	42.31	0.36	Valdiosera et al. (2018) doi: 10.1073/pnas.1717762115	PCA, Admixture,
SATP.SG	Satsurbliia_HG/Caucasus_HG	Georgia	Palaeolithic	13255	M	42.38	42.59	Jones et al. (2015) doi: 10.1038/ncomms9912	PCA, Admixture, Left-pop in qpWave and qpAdm for Basal Eurasia, f_4 -statistics, f_4 -statistics for Neanderthal
Stuttgart_published.DG	CEurope_LBK_EN	Germany	Neolithic	7140	F	48.78	9.18	Lazaridis et al. (2014) doi: 10.1038/nature13673	PCA, Admixture, Right-pop in qpWave and qpAdm (Outgroup)
TAF009	Iberomaurasian	Morocco	Palaeolithic	14357	M	34.81	-2.41	van de Loosdrecht et al. (2018) doi: 10.1126/science.aar8380	PCA, Admixture
TAF010	Iberomaurasian	Morocco	Palaeolithic	14605	M	34.81	-2.41	van de Loosdrecht et al. (2018) doi: 10.1126/science.aar8380	PCA, Admixture
TAF011	Iberomaurasian	Morocco	Palaeolithic	14500	M	34.81	-2.41	van de Loosdrecht et al. (2018) doi: 10.1126/science.aar8380	PCA, Admixture, NNLS, Left-pop in qpWave and qpAdm, Left-pop in qpWave and qpAdm for Basal

										Eurasia, f4-Statistics, f4-Statistics for Neanderthal
TAF012	Iberomaurusian	Morocco	Palaeolithic	14470	F	34.81	-2.41	van de Loosdrecht et al. (2018) doi: 10.1126/science.aar8380	PCA, Admixture,	
TAF013	Iberomaurusian	Morocco	Palaeolithic	14500	M	34.81	-2.41	van de Loosdrecht et al. (2018) doi: 10.1126/science.aar8380	PCA, Admixture,	
TAF014	Iberomaurusian	Morocco	Palaeolithic	14500	M	34.81	-2.41	van de Loosdrecht et al. (2018) doi: 10.1126/science.aar8380	PCA, Admixture,	
TAF015	Iberomaurusian	Morocco	Palaeolithic	14500	M	34.81	-2.41	van de Loosdrecht et al. (2018) doi: 10.1126/science.aar8380	PCA, Admixture,	
Tep002.SG	Anatolia_N	Turkey	Neolithic	8585	F	38.17	34.49	Kilinc et al. (2016) doi: 10.1016/j.cub.2016.07.057	PCA, Admixture,	
Tep003.SG	Anatolia_N	Turkey	Neolithic	8505	M	38.17	34.49	Kilinc et al. (2016) doi: 10.1016/j.cub.2016.07.057	PCA, Admixture,	
Tep004.SG	Anatolia_N	Turkey	Neolithic	8295	F	38.17	34.49	Kilinc et al. (2016) doi: 10.1016/j.cub.2016.07.057	PCA, Admixture,	
Tep006.SG	Anatolia_N	Turkey	Neolithic	8230	M	38.17	34.49	Kilinc et al. (2016) doi: 10.1016/j.cub.2016.07.057	PCA, Admixture,	
Tianyuan	EAsia_UP	China	Palaeolithic	39475	M	39.39	115.52	Yang et al. (2017) doi: 10.1016/j.cub.2017.09.030	PCA, Admixture,	
TOR.11	SWEurope_N	Spain	Neolithic	6980	F	36.63	-4.52	Fregel et al. (2018) doi: 10.1073/pnas.1800851115	PCA, Admixture,	
TOR.6	SWEurope_N	Spain	Neolithic	6980	F	36.63	-4.52	Fregel et al. (2018) doi: 10.1073/pnas.1800851115	PCA, Admixture,	
TOR.7	SWEurope_N	Spain	Neolithic	6980	F	36.63	-4.52	Fregel et al. (2018) doi: 10.1073/pnas.1800851115	PCA, Admixture,	
TOR.8	SWEurope_N	Spain	Neolithic	6980	F	36.63	-4.52	Fregel et al. (2018) doi: 10.1073/pnas.1800851115	PCA, Admixture,	
Ust_Ishim_published.DG	Ust_Ishim/Russia_HG	Russia	Palaeolithic	45020	M	57.70	71.10	Fu et al. (2014) doi: 10.1038/nature13810	PCA, Admixture, Right-pop in qpWave and qpAdm (Outgroup), Right-pop in qpWave and qpAdm for Basal Eurasia (Outgroup), f4-Statistics	
Vestonice16	CEurope_MUP	Czech Republic	Palaeolithic	30010	M	48.53	16.39	Fu et al. (2016) doi: 10.1038/nature17993	PCA, Admixture, Right-pop in qpWave and qpAdm (Outgroup)	
Villabruna	SEurope_HG	Italy	Palaeolithic	13980	M	46.15	12.21	Fu et al. (2016) doi: 10.1038/nature17993	PCA, Admixture, NNLS	
Vt777.SG	SEAsia_N	Vietnam	Neolithic	2265	F	19.81	105.79	McCull et al. (2018) doi: 10.1126/science.aat3628	PCA, Admixture	
Vt778.SG	SEAsia_N	Vietnam	Neolithic	2625	M	22.39	103.47	McCull et al. (2018) doi: 10.1126/science.aat3628	PCA, Admixture	
Vt779.SG	SEAsia_BA	Vietnam	Bronze Age	2247	F	19.81	105.79	McCull et al. (2018) doi: 10.1126/science.aat3628	PCA, Admixture	
Vt781.SG	SEAsia_BA	Vietnam	Bronze Age	2249	F	19.81	105.79	McCull et al. (2018) doi: 10.1126/science.aat3628	PCA, Admixture	
Vt796.SG	SEAsia_BA	Vietnam	Bronze Age	2172	F	19.81	105.79	McCull et al. (2018) doi: 10.1126/science.aat3628	PCA, Admixture	
Vt808.SG	SEAsia_BA	Vietnam	Bronze Age	2251	F	19.81	105.79	McCull et al. (2018) doi: 10.1126/science.aat3628	PCA, Admixture	
Vt833.SG	SEAsia_N	Vietnam	Neolithic	4149	F	19.81	105.79	McCull et al. (2018) doi: 10.1126/science.aat3628	PCA, Admixture	
Vt880.SG	SEAsia_N	Vietnam	Neolithic	4000	F	21.01	107.29	McCull et al. (2018) doi: 10.1126/science.aat3628	PCA, Admixture	
WC1.SG	Zagros_N	Iran	Neolithic	9219	M	34.61	47.11	Broushaki et al. (2016) doi: 10.1126/science.aaf7943	PCA, Admixture, NNLS, Left-pop in qpWave and qpAdm, Left-pop in qpWave and qpAdm for Basal Eurasia, f4-Statistics, f4-Statistics for Neanderthal	

Table S3: ‘Right’ populations used qpAdm for all the possible source combinations of N= (2..5)

SampleID	Group ID	Publication
Bichon.SG	CEurope_HG	Jones et al. (2015) doi: 10.1038/ncomms9912
DA38.SG	CAsia_XiongNu_WE	Damgaard et al. (2018) doi:10.1038/s41586-018-0094-2
DA39.SG	CAsia_XiongNu	Damgaard et al. (2018) doi:10.1038/s41586-018-0094-2
DA43.SG	CAsia_XiongNu	Damgaard et al. (2018) doi:10.1038/s41586-018-0094-2
DA45.SG	CAsia_XiongNu	Damgaard et al. (2018) doi:10.1038/s41586-018-0094-2
I0100	CEurope_LBK_EN	Lipson et al. (2017) doi: 10.1038/nature24476
I0103	CEurope_LN	Mathieson et al. (2015) doi: 10.1038/nature16152
I0112	CEurope_BellBeaker_BA	Mathieson et al. (2015) doi: 10.1038/nature16152
I1499	CEurope_MN	Mathieson et al. (2015) doi: 10.1038/nature16152
Kostenki14	Russia_EUP	Fu et al. (2016) doi: 10.1038/nature17993
Loschbour_published.DG	Loschbour_HG/CEurope_HG	Lazaridis et al. (2014) doi: 10.1038/nature13673
M63.SG	SAsia_Mebrak	Jeong et al. (2016) doi: 10.1073/pnas.1520844113
MA1.SG	Russia_HG	Raghavan et al. (2013) doi: 10.1038/nature12736
Ma555.SG	SEAsia_Historical	McColl et al. (2018) doi: 10.1126/science.aat3628
Ma912.SG	SEAsia_LN	McColl et al. (2018) doi: 10.1126/science.aat3628
mota.SG	Mota_EN/EAfrica_EN	Llorente et al. (2015) doi: 10.1126/science.aaf3945
S10.SG	SAsia_Samdzong	Jeong et al. (2016) doi: 10.1073/pnas.1520844113
S35.SG	SAsia_Samdzong	Jeong et al. (2016) doi: 10.1073/pnas.1520844113
S41.SG	SAsia_Samdzong	Jeong et al. (2016) doi: 10.1073/pnas.1520844113
Stuttgart_published.DG	CEurope_LBK_EN	Lazaridis et al. (2014) doi: 10.1038/nature13673
Ust_Ishim_published.DG	Ust_Ishim/Russia_HG	Fu et al. (2014) doi: 10.1038/nature13810
Vestonice16	CEurope_MUP	Fu et al. (2016) doi: 10.1038/nature17993

Table S4: Right populations used qpAdm to search for traces of the basal Eurasian lineage in modern AP populations in the form (Test, Mota, Early hunter-gatherer)

SampleID	Group ID	Publication
Kostenki14	Russia_EUP	Fu et al. (2016) doi: 10.1038/nature17993
Ust_Ishim_published.DG	Ust_Ishim/Russia_HG	Fu et al. (2014) doi: 10.1038/nature13810
BR_Onge-2.DG	Onge	Mallick et al. (2016) doi: 10.1038/nature18964
S_Han-1.DG	Han	Mallick et al. (2016) doi: 10.1038/nature18964
S_Papuan-14.DG	Papuan	Skoglund et al. (2015) doi: 10.1038/nature14895

Table S5: Mixture proportions on AP and Iran populations inferred by *qpAdm* as a combination of four ancient sources

Target	Pop1	Pop2	Pop3	Pop4	dof	chisq	tail	Prob.Pop1	Prob.Pop2	Prob.Pop3	Prob.Pop4	Feasible	SE.Pop1	SE.Pop2	SE.Pop3	SE.Pop4
M_Yemen	Caucasus_HG	Zagros_N	Iberomaurusian	Natufian	7	10.36	0.16888	0.105	0.105	0.12	0.67	Yes	0.85	0.664	0.284	0.475
M_Yemen	Caucasus_HG	Levant_EBA	Levant_PPN	Iberomaurusian	7	5.748	0.56951	0.06	0.625	0.03	0.285	Yes	0.205	0.411	0.241	0.038
M_Iran	Caucasus_EBA	Caucasus_HG	Zagros_N	Iberomaurusian	7	11.31	0.12577	0.413	0.286	0.179	0.123	Yes	1.038	1.621	0.657	0.076
M_Iran	Caucasus_HG	Zagros_N	Levant_PPN	Iberomaurusian	7	3.126	0.87308	0.458	0.358	0.157	0.027	Yes	0.215	0.216	0.062	0.06
M_Iran	Caucasus_HG	Zagros_N	Levant_EBA	Iberomaurusian	7	4.858	0.67735	0.593	0.164	0.151	0.092	Yes	0.17	0.162	0.08	0.051
M_Iran	Caucasus_HG	Zagros_N	Iberomaurusian	Natufian	7	5.025	0.65685	0.519	0.246	0.039	0.196	Yes	0.238	0.209	0.091	0.135
M_UAE	Caucasus_EBA	Caucasus_HG	Zagros_N	Iberomaurusian	7	9.024	0.25093	0.393	0.104	0.217	0.287	Yes	0.312	0.497	0.232	0.049
M_UAE	Caucasus_HG	Zagros_N	Levant_EBA	Iberomaurusian	7	5.567	0.59109	0.437	0.173	0.141	0.249	Yes	0.158	0.153	0.07	0.047
M_UAE	Caucasus_HG	Zagros_N	Levant_PPN	Iberomaurusian	7	4.513	0.71914	0.329	0.344	0.13	0.198	Yes	0.236	0.233	0.065	0.061
M_UAE	Caucasus_HG	Zagros_N	Iberomaurusian	Natufian	7	3.593	0.82531	0.472	0.175	0.235	0.118	Yes	0.168	0.151	0.067	0.101
M_Oman	Caucasus_HG	Zagros_N	Levant_PPN	Iberomaurusian	7	5.712	0.57374	0.181	0.417	0.214	0.188	Yes	0.251	0.253	0.065	0.066
M_Oman	Caucasus_HG	Zagros_N	Levant_EBA	Iberomaurusian	7	7.293	0.39898	0.296	0.171	0.265	0.268	Yes	0.177	0.167	0.072	0.049
M_Oman	Caucasus_HG	Zagros_N	Iberomaurusian	Natufian	7	5.556	0.59242	0.371	0.198	0.215	0.216	Yes	0.208	0.181	0.077	0.118
M_SaudiArabia	Caucasus_EBA	Zagros_N	Levant_PPN	Iberomaurusian	7	4.271	0.74807	0.359	0.118	0.34	0.183	Yes	0.394	0.333	0.19	0.128

M_SaudiArabia	Caucasus_HG	Zagros_N	Levant_PPN	Iberomaurusian	7	4.441	0.7278	0.1	0.35	0.468	0.082	Yes	0.223	0.229	0.062	0.066
M_SaudiArabia	Caucasus_HG	Zagros_N	Iberomaurusian	Natufian	7	6.984	0.43059	0.169	0.127	0.034	0.67	Yes	0.306	0.251	0.111	0.178
M_SaudiArabia	Caucasus_HG	Levant_EBA	Levant_PPN	Iberomaurusian	7	5.335	0.6191	0.229	0.451	0.129	0.191	Yes	0.163	0.33	0.197	0.032
M_SaudiArabia	Zagros_N	Levant_EBA	Levant_PPN	Iberomaurusian	7	5.828	0.56002	0.268	0.338	0.27	0.123	Yes	7.816	14.98	9.988	2.825
M_SaudiArabia	Zagros_N	Levant_EBA	Levant_PPN	Natufian	7	3.211	0.86482	0.267	0.072	0.132	0.53	Yes	0.106	0.187	0.267	0.321

Levant_PPN		9	6.158	0.7240	0.513	0.49	Yes	0.036	0.036									
Natufian		9	7.382	0.5975	0.239	0.76	Yes	0.072	0.072									
Iberomaurusian		9	7.874	0.5469	0.781	0.22	Yes	0.032	0.032									
Natufian		9	13.769	0.1308	0.069	0.93	Yes	0.059	0.059									
Pop2	Pop3	dof	chisq	tail	Prob.Pop1	Prob.Pop2	Prob.Pop3	Feasible	SE.Pop1	SE.Pop2	SE.Pop3							
Caucasus_HG	Iberomaurusian	8	12.454	0.1321	0.22	0.459	0.324	Yes	1.384	1.54	0.2							
Zagros_N	Iberomaurusian	8	9.055	0.3377	0.46	0.257	0.285	Yes	0.078	0.12	0.1							
Zagros_N	Iberomaurusian	8	9.542	####	0.64	0.105	0.253	Yes	0.137	0.18	0.1							
Levant_EBA	Iberomaurusian	8	7.149	0.5207	0.6	0.11	0.292	Yes	0.096	0.08	0							
Levant_PPN	Iberomaurusian	8	7.288	0.5059	0.67	0.053	0.281	Yes	0.063	0.05	0							
Iberomaurusian	Natufian	8	5.144	0.7421	0.65	0.3	0.05	Yes	0.099	0.04	0.1							
Levant_EBA	Iberomaurusian	8	14.763	####	0.54	0.295	0.169	Yes	0.111	0.07	0.1							
Levant_PPN	Iberomaurusian	8	7.804	0.4529	0.66	0.21	0.129	Yes	0.065	0.04	0							
Iberomaurusian	Natufian	8	12.098	0.1469	0.57	0.079	0.356	Yes	0.093	0.05	0.1							
Caucasus_HG	Iberomaurusian	8	12.914	0.1149	0.22	0.631	0.152	Yes	0.464	0.51	0.1							
Zagros_N	Levant_PPN	8	8.062	0.4274	0.2	0.609	0.191	Yes	0.176	0.09	0.1							
Zagros_N	Iberomaurusian	8	11.333	0.1835	0.59	0.293	0.115	Yes	0.099	0.15	0.1							
Zagros_N	Natufian	8	15.027	0.0586	0.1	0.497	0.404	Yes	0.279	0.13	0.2							
Zagros_N	Levant_EBA	8	7.693	####	0.5	0.356	0.147	Yes	0.165	0.1	0.1							
Zagros_N	Levant_PPN	8	2.598	0.9570	0.39	0.442	0.173	Yes	0.134	0.1	0							
Zagros_N	Iberomaurusian	8	8.981	####	0.83	0.075	0.093	Yes	0.15	0.2	0.1							
Zagros_N	Natufian	8	5.183	0.7379	0.44	0.322	0.234	Yes	0.126	0.09	0.1							
Levant_EBA	Iberomaurusian	8	5.884	####	0.75	0.12	0.132	Yes	0.104	0.09	0							
Levant_PPN	Iberomaurusian	8	6.138	0.6318	0.81	0.08	0.114	Yes	0.07	0.06	0							
Iberomaurusian	Natufian	8	7.216	0.5135	0.78	0.133	0.088	Yes	0.117	0.05	0.1							
Zagros_N	Iberomaurusian	8	8.337	0.4013	0.55	0.11	0.336	Yes	0.081	0.12	0.1							
Levant_EBA	Iberomaurusian	8	9.004	####	0.46	0.234	0.311	Yes	0.091	0.08	0							
Levant_PPN	Iberomaurusian	8	9.841	0.2764	0.59	0.12	0.289	Yes	0.061	0.05	0							
Iberomaurusian	Natufian	8	7.456	####	0.58	0.29	0.131	Yes	0.104	0.04	0.1							

Levant_EBA	Iberomaurusian	8	11.024	####	0.41	0.374	0.218	Yes	0.087	0.06	0						
Levant_PPN	Iberomaurusian	8	6.568	0.5839	0.59	0.257	0.151	Yes	0.061	0.04	0						
Iberomaurusian	Natufian	8	10.142	0.2552	0.5	0.097	0.408	Yes	0.088	0.05	0.1						
Levant_EBA	Iberomaurusian	8	6.486	0.5929	0.2	0.594	0.206	Yes	0.275	0.28	0						
Levant_PPN	Iberomaurusian	8	4.669	0.7923	0.49	0.281	0.228	Yes	0.074	0.06	0						
Iberomaurusian	Natufian	8	10.638	0.2231	0.29	0.112	0.594	Yes	0.198	0.05	0.2						
Zagros_N	Natufian	8	6.869	0.5508	0.1	0.193	0.706	Yes	0.155	0.1	0.1						
Levant_EBA	Iberomaurusian	8	4.87	0.7714	0.19	0.62	0.191	Yes	0.096	0.09	0						
Levant_PPN	Iberomaurusian	8	8.786	0.3607	0.43	0.399	0.17	Yes	0.053	0.04	0						
Iberomaurusian	Natufian	8	7.681	0.4652	0.3	0.082	0.622	Yes	0.107	0.04	0.1						
Levant_EBA	Iberomaurusian	8	6.931	0.5441	0.09	0.728	0.179	Yes	0.096	0.06	0.1						
Levant_EBA	Natufian	8	4.067	0.8510	0.23	0.014	0.756	Yes	0.067	0.25	0.3						
Levant_PPN	Iberomaurusian	8	4.615	0.7978	0.45	0.494	0.06	Yes	0.059	0.04	0						
Levant_PPN	Natufian	8	5.212	0.7347	0.35	0.298	0.348	Yes	0.205	0.52	0.7						
Levant_PPN	Iberomaurusian	8	9.129	0.3315	0.4	0.299	0.3	Yes	0.084	0.07	0						
Iberomaurusian	Natufian	8	12.208	0.1422	0.19	0.185	0.624	Yes	0.215	0.05	0.2						
Levant_EBA	Iberomaurusian	8	6.051	0.6415	0.09	0.632	0.279	Yes	0.101	0.09	0						
Levant_PPN	Iberomaurusian	8	14.895	0.0612	0.35	0.4	0.255	Yes	0.056	0.04	0						
Iberomaurusian	Natufian	8	10.653	0.2221	0.22	0.162	0.616	Yes	0.117	0.04	0.1						
Levant_EBA	Iberomaurusian	8	6.613	0.5789	0.03	0.691	0.279	Yes	0.098	0.06	0.1						
Levant_PPN	Iberomaurusian	8	9.229	####	0.37	0.47	0.159	Yes	0.06	0.03	0						
Iberomaurusian	Natufian	8	10.365	####	0.19	0.086	0.729	Yes	0.093	0.06	0.1						
Pop2	Pop3	Pop4	Pop5	dof	chisq	tail	Prob.Pop1	Prob.Pop2	Prob.Pop3	Prob.Pop4	Prob.Pop5	Feasible	SE.Pop1	SE.Pop2	SE.Pop3	SE.Pop4	SE.Pop5
Zagros_N	Levant_EBA	Levant_PPN	Iberomaurusian	6	3.01	0.8074	0.531	0.236	0.107	0.06	0.1	Yes	0.197	0.374	0.46	0.34	0.116
Zagros_N	Levant_EBA	Levant_PPN	Iberomaurusian	6	4.76	0.5748	0.149	0.143	0.32	0.24	0.1	Yes	0.215	0.434	0.585	0.428	0.142

Table S7: CP/NNLS - Weighted jackknife bootstraps for overall by country – limiting to the four sources identified in the qpAdm results

	Caucasus_HG	Caucasus_HG-SE	Iberomaurusian	Iberomaurusian-SE	Natufians	Natufians-SE	Zagros_N	Zagros_N-SE
Iran	0.49796	0.03972	0.11231	0.01412	0.17329	0.02679	0.21644	0.03381
UAE	0.30593	0.02787	0.28737	0.01379	0.12553	0.02590	0.28117	0.02623
Oman	0.27965	0.02317	0.26628	0.01338	0.21558	0.02277	0.23849	0.02582
Saudi Arabia	0.16309	0.02724	0.04043	0.01533	0.64661	0.02718	0.14988	0.04124
Yemen	0.24566	0.03173	0.15767	0.01330	0.52793	0.02437	0.06874	0.04289

Table S8: CP/NNLS - Weighted jackknife bootstraps for overall by Cluster – limiting to the four sources identified in the qpAdm results

	Caucasus_HG	Caucasus_HG-SE	Iberomaurusian	Iberomaurusian-SE	Natufians	Natufians-SE	Zagros_N	Zagros_N-SE
Cluster A	0.366975412	0.03824062	0.59111635	0.011239602	0.0017743	0.0107156	0.040134	0.0383911
Cluster B	0.586148121	0.02661906	0	0	0.4138519	0.0266191	0	0
Cluster C	0.497906598	0.02312623	0.073116912	0.01555024	0.4289765	0.0274358	0	0
Cluster D	0.615670938	0.126787578	0.19664222	0.018059174	0	0	0.1876868	0.1395406
Cluster E	0.789207075	0.024338345	0	0	0.2107929	0.0243383	0	0
Cluster F	0.181632249	0.079475129	0	0	0.7167268	0.0238446	0.1016409	0.0776371

Table S9: Neanderthal introgression measured through the $f_4(\text{Test, Mbuti; Altai, Denisovan})$ test

Pop1_W	Pop2_X	Pop3_Y	Pop4_Z	f_4 statistic	SD	Z
M_Armenia	Mbuti	Altai	Denisova	0.00107	0.000305	3.506
M_Bedouin	Mbuti	Altai	Denisova	0.001042	0.000293	3.55
M_Druze_Israel	Mbuti	Altai	Denisova	0.001065	0.000298	3.567
M_Finland	Mbuti	Altai	Denisova	0.001253	0.000306	4.095
M_France	Mbuti	Altai	Denisova	0.001239	0.000308	4.021
M_Georgia	Mbuti	Altai	Denisova	0.001144	0.000305	3.755
M_Iran	Mbuti	Altai	Denisova	0.000987	0.000293	3.367
M_Italy	Mbuti	Altai	Denisova	0.001222	0.000303	4.038
M_Jordan	Mbuti	Altai	Denisova	0.001027	0.000296	3.469
M_Lebanon	Mbuti	Altai	Denisova	0.000965	0.000308	3.134
M_Lezgins	Mbuti	Altai	Denisova	0.001187	0.000305	3.896
M_Oman	Mbuti	Altai	Denisova	0.000902	0.000287	3.138
M_Romania	Mbuti	Altai	Denisova	0.001238	0.000303	4.087
M_SaudiArabia	Mbuti	Altai	Denisova	0.000968	0.000292	3.319
M_Spain	Mbuti	Altai	Denisova	0.001256	0.0003	4.186
M_Syria	Mbuti	Altai	Denisova	0.001028	0.000301	3.41
M_Turkey	Mbuti	Altai	Denisova	0.001122	0.000303	3.707
M_UAE	Mbuti	Altai	Denisova	0.000952	0.000287	3.315
M_UK	Mbuti	Altai	Denisova	0.001269	0.000307	4.131
M_Yemen	Mbuti	Altai	Denisova	0.000953	0.000289	3.292
Kotias_HG	Mbuti	Altai	Denisova	0.000878	0.000409	2.146
Loschbour	Mbuti	Altai	Denisova	0.00105	0.00038	2.765
Iberomaurusian	Mbuti	Altai	Denisova	0.000645	0.000441	1.463
Natufian	Mbuti	Altai	Denisova	0.000798	0.000641	1.244
Satsurbliia_HG	Mbuti	Altai	Denisova	0.001473	0.000469	3.142
Zagros_N	Mbuti	Altai	Denisova	0.000737	0.000398	1.851
Cluster_A	Mbuti	Altai	Denisova	0.000775	0.000277	2.793
Cluster_D	Mbuti	Altai	Denisova	0.000946	0.000295	3.206
Cluster_F	Mbuti	Altai	Denisova	0.001008	0.000293	3.439

Table S10: *qpAdm* in the form (Test, Mota, early hunter-gatherer)

Test	Mota_EN	NWRussia_HG	dof	chisq	tail	Prob. Mota_EN	Prob. NWRussia_HG	Feasible	SE. Mota_EN	SE. NWRussia_HG
M_Armenia	Mota_EN	NWRussia_HG	3	5.35	0.1479	0.26	0.74	Yes	0.069	0.069
M_Bedouin	Mota_EN	NWRussia_HG	3	4.051	0.2560	0.322	0.678	Yes	0.063	0.063
M_Druze	Mota_EN	NWRussia_HG	3	3.009	0.3902	0.268	0.732	Yes	0.067	0.067
M_Dubai	Mota_EN	NWRussia_HG	3	5.081	0.1660	0.447	0.553	Yes	0.06	0.06
M_France	Mota_EN	NWRussia_HG	3	7.066	0.0698	0.154	0.846	Yes	0.074	0.074
M_Georgia	Mota_EN	NWRussia_HG	3	3.432	0.3297	0.259	0.741	Yes	0.066	0.066
M_Iran	Mota_EN	NWRussia_HG	3	6.806	0.0783	0.371	0.629	Yes	0.066	0.066
M_Italy	Mota_EN	NWRussia_HG	3	4.477	0.2144	0.184	0.816	Yes	0.07	0.07
M_Jordan	Mota_EN	NWRussia_HG	3	4.403	0.2211	0.334	0.666	Yes	0.064	0.064
M_Lezgins	Mota_EN	NWRussia_HG	3	6.343	0.0960	0.214	0.786	Yes	0.071	0.071
M_Lebanon	Mota_EN	NWRussia_HG	3	4.62	0.2018	0.32	0.68	Yes	0.069	0.069
M_Oman	Mota_EN	NWRussia_HG	3	3.003	0.3912	0.455	0.545	Yes	0.058	0.058
M_Palestina	Mota_EN	NWRussia_HG	3	2.764	0.4295	0.332	0.668	Yes	0.062	0.062
M_Romania	Mota_EN	NWRussia_HG	3	3.512	0.3192	0.203	0.797	Yes	0.067	0.067
M_SaudiArabia	Mota_EN	NWRussia_HG	3	2.641	0.4503	0.366	0.634	Yes	0.061	0.061
M_Spain	Mota_EN	NWRussia_HG	3	6.649	0.0840	0.158	0.842	Yes	0.072	0.072
M_Syria	Mota_EN	NWRussia_HG	3	2.963	0.3974	0.31	0.69	Yes	0.065	0.065
M_UK	Mota_EN	NWRussia_HG	3	4.553	0.2076	0.15	0.85	Yes	0.069	0.069
M_Yemen	Mota_EN	NWRussia_HG	3	2.06	0.5601	0.39	0.61	Yes	0.058	0.058
Kotias_HG	Mota_EN	NWRussia_HG	3	2.689	0.4421	0.389	0.611	Yes	0.093	0.093
Natufian	Mota_EN	NWRussia_HG	3	3.92	0.2702	0.231	0.769	Yes	0.152	0.152
Zagros_N	Mota_EN	NWRussia_HG	3	0.223	0.9739	0.484	0.516	Yes	0.087	0.087
Satsurbli_HG	Mota_EN	NWRussia_HG	3	1.595	0.6605	0.399	0.601	Yes	0.106	0.106
Iberomaurusian	Mota_EN	NWRussia_HG	3	11.054	0.0114	0.602	0.398	Yes	0.104	0.104
Cluster_F	Mota_EN	NWRussia_HG	3	2.883	0.4100	0.349	0.651	Yes	0.061	0.061
Cluster_A	Mota_EN	NWRussia_HG	3	3.177	0.3651	0.491	0.509	Yes	0.055	0.055
Cluster_D	Mota_EN	NWRussia_HG	3	17.712	0.0005	0.454	0.546	Yes	0.081	0.081