SUPPLEMENTARY MATERIALS

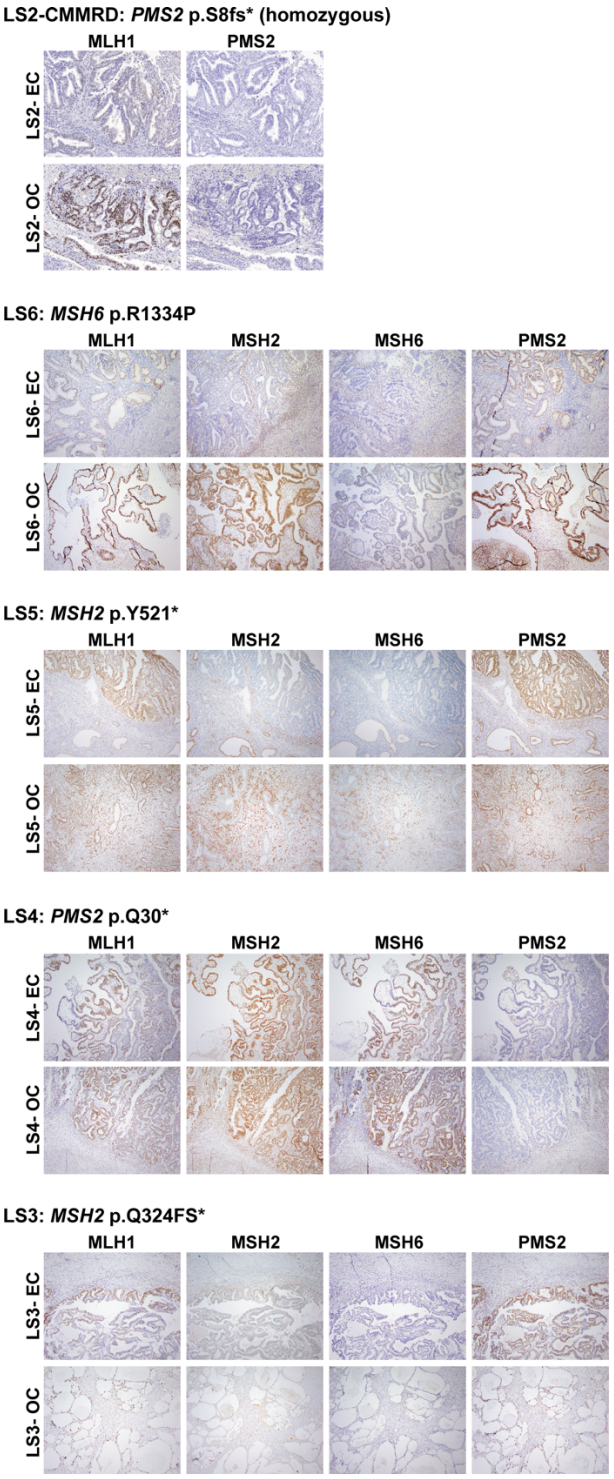
Clonal relationship and directionality of progression of synchronous endometrial and ovarian carcinomas in patients with DNA mismatch repair-deficiency associated syndromes

Moukarzel et al

Supplementary Figures S1-S3

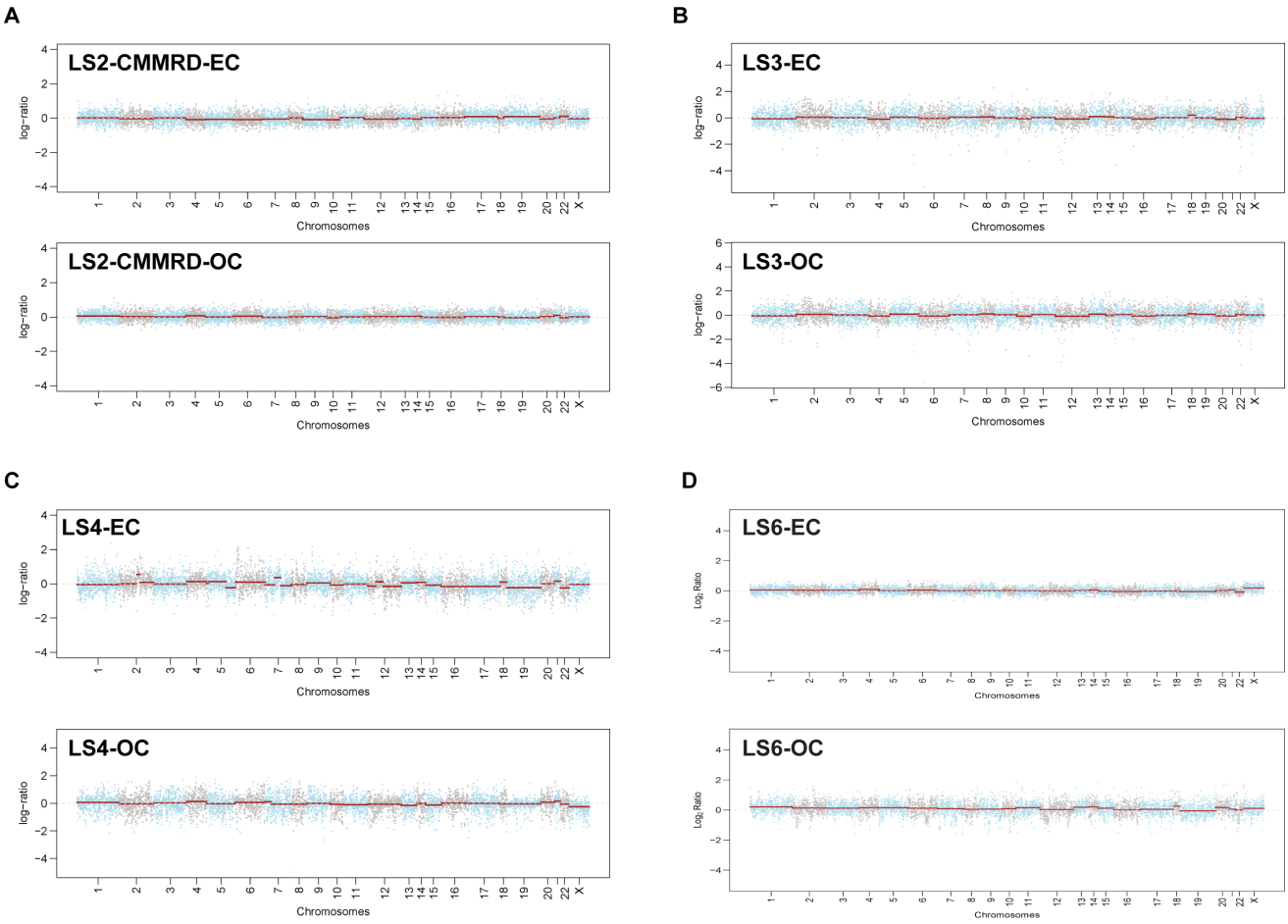
Supplementary Table S1

Supplementary Figure S1



Supplementary Figure S1: Immunohistochemical analysis of DNA mismatch repair protein expression in synchronous endometrial and ovarian cancers from patients with germline DNA mismatch repair gene mutations.
MLH1, MSH2, MSH6 and PMS2 protein expression in the synchronous endometrial (ECs) and ovarian cancers (OCs) from patients LS2-CMMRD, LS6, LS5, LS4 and LS3 harboring germline DNA mismatch repair mutations as indicated.

Supplementary Figure S2



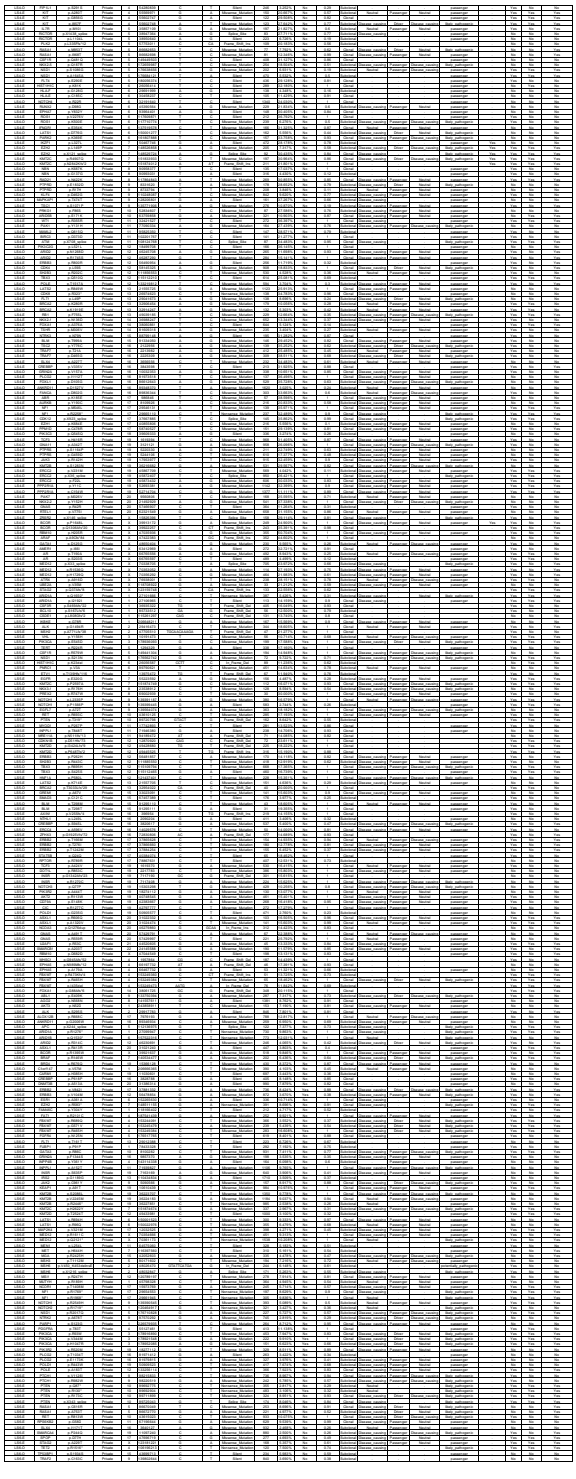
Supplementary Figure 2: Chromosome plots of synchronous endometrial and ovarian cancers from patients with germline DNA mismatch repair mutations. Log2-ratios are plotted on the y-axis and the genomic positions are plotted on the x-axis for the synchronous endometrial cancer (EC) and ovarian cancer (OC) cases (**A**) LS2-CMMRD, (**B**) LS3, (**C**) LS4 and (**D**) LS6.

Supplementary Figure S3

Supplementary Figure S3: Clonal composition analysis of sporadic synchronous endometrioid endometrial and endometrioid ovarian cancers.
Re-analysis of sporadic synchronous endometrial (ECs) and ovarian cancers (OCs) (from Schultheis et al, JNCI 2016) subjected to whole-exome sequencing (SYN1, SYN3, SYN4) or targeted MSK-IMPACT sequencing (SP6, SP7, SP10, SP11, SV12, SP13, SP14, SV1, SV3, SV4, SP4). ECs and OCs of a given cases were clonally related, however for these cases, chronology of development could not be inferred based on clonal composition analysis. For each case, cancer cell fractions of somatic mutations identified in the EC and synchronous OC (left), color coded according to the legend, and copy number plots with the Log_2-ratios on the y-axis and the genomic positions on the x-axis are depicted.

Supplementary Table S1. Somatic mutations identified by WGS (MPACT sequencing) in ng-tolerance-moderate/tol and ex-ante cancers from patients with DNA mismatch repair-deficiency associated syndromes.

Sample ID	Donor number	Genome and change	Base/RNA/aa Mutations	Mutation type	Mutation status	Reference allele	Mutation allele	Mutation type	Depth in mutation (Tumour)	Depth in mutation (Normal)	Mutation inherited	Tumour type	Clonal / Subclonal	Mutation Tumor	CALCSI	FUCHS6	Pathogenicity	Loss of heterozygosity	Tumour mutational burden	Survival	Survival (2020 if alive)
LS-C-DAMRI-F	49	g.chr2:47776-TT	Guided	2	47776	TT	-	Frame_Shift_Del	108	0.1429	No	0.01	Subclonal				Mod/_pathogenic		Yes	Yes	Yes
LS-C-DAMRI-F	49	g.chr2:47776-TT	Guided	2	47776	TT	-	Frame_Shift_Del	108	0.1429	No	0.01	Clonal				Mod/_pathogenic		Yes	Yes	Yes
LS-C-DAMRI-F	49	g.chr2:47776-TT	Guided	2	47776	TT	TTCTTCTTCTTCTTCTTCTTCTT	Frame_Shift_Ins	112	0.1429	No	0.01	Clonal				Mod/_pathogenic		Yes	Yes	Yes
LS-C-DAMRI-F	49	g.chr2:47776-TT	Guided	2	47776	TT	TTCTTCTTCTTCTTCTTCTTCTT	Frame_Shift_Ins	112	0.1429	No	0.01	Subcl

UEdi5	16527	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Clonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16528	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16529	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16530	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16531	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16532	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16533	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16534	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16535	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16536	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16537	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16538	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16539	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16540	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16541	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16542	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16543	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16544	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16545	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16546	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16547	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16548	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16549	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16550	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16551	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16552	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16553	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16554	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16555	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16556	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16557	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16558	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16559	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16560	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16561	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16562	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16563	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16564	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16565	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16566	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16567	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16568	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16569	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16570	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16571	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16572	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16573	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16574	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16575	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16576	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16577	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16578	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16579	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16580	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16581	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16582	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16583	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16584	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16585	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16586	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16587	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16588	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16589	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16590	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16591	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16592	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16593	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16594	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16595	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16596	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16597	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16598	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16599	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16600	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16601	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16602	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16603	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16604	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16605	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16606	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16607	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16608	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16609	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16610	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16611	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16612	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16613	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16614	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16615	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16616	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16617	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16618	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16619	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16620	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16621	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16622	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16623	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16624	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16625	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16626	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16627	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16628	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16629	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16630	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16631	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16632	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16633	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16634	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16635	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16636	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16637	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16638	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16639	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16640	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16641	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16642	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16643	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16644	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16645	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16646	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No
UEdi5	16647	p.Ala2...	Female	18	11/08/2020	0	0	Missense_Mutation	606	0.1925	No	0.01	Subclonal	Airway_vascular	Passenger	Neutral	passenger		Yes	No	No

LEU-0	7617	e.76617	Quaker	10	10	10766566	0	0	Mesenter_Bonded	1661	61.4375	No	0.01	Dorsal	Elevate_vaulting	Passenger	Neutral	passenger		Yale	No	No
LEU-0	7618	e.76618	Quaker	10	10	10766567	0	0	Mesenter_Bonded	1662	61.4375	No	0.01	Dorsal	Elevate_vaulting	Passenger	Neutral	passenger		Yale	No	No
LEU-0	7619	e.76619	Quaker	10	10	10766568	0	0	Mesenter_Bonded	1663	61.4375	No	0.01	Dorsal	Elevate_vaulting	Passenger	Neutral	passenger		Yale	No	No
LEU-0	8552	e.85520	Quaker	10	10	10766569	0	0	Ectoderm	1664	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8553	e.85521	Quaker	10	10	10766570	0	0	Ectoderm	1665	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8554	e.85522	Quaker	10	10	10766571	0	0	Ectoderm	1666	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8555	e.85523	Quaker	10	10	10766572	0	0	Ectoderm	1667	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8556	e.85524	Quaker	10	10	10766573	0	0	Ectoderm	1668	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8557	e.85525	Quaker	10	10	10766574	0	0	Ectoderm	1669	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8558	e.85526	Quaker	10	10	10766575	0	0	Ectoderm	1670	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8559	e.85527	Quaker	10	10	10766576	0	0	Ectoderm	1671	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8560	e.85528	Quaker	10	10	10766577	0	0	Ectoderm	1672	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8561	e.85529	Quaker	10	10	10766578	0	0	Ectoderm	1673	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8562	e.85530	Quaker	10	10	10766579	0	0	Ectoderm	1674	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8563	e.85531	Quaker	10	10	10766580	0	0	Ectoderm	1675	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8564	e.85532	Quaker	10	10	10766581	0	0	Ectoderm	1676	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8565	e.85533	Quaker	10	10	10766582	0	0	Ectoderm	1677	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8566	e.85534	Quaker	10	10	10766583	0	0	Ectoderm	1678	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8567	e.85535	Quaker	10	10	10766584	0	0	Ectoderm	1679	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8568	e.85536	Quaker	10	10	10766585	0	0	Ectoderm	1680	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8569	e.85537	Quaker	10	10	10766586	0	0	Ectoderm	1681	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	7620	e.76620	Quaker	10	10	10766587	0	0	Mesenter_Bonded	1682	61.4375	No	0.01	Dorsal	Elevate_vaulting	Passenger	Neutral	passenger		Yale	No	No
LEU-0	7621	e.76621	Quaker	10	10	10766588	0	0	Mesenter_Bonded	1683	61.4375	No	0.01	Dorsal	Elevate_vaulting	Passenger	Neutral	passenger		Yale	No	No
LEU-0	7622	e.76622	Quaker	10	10	10766589	0	0	Mesenter_Bonded	1684	61.4375	No	0.01	Dorsal	Elevate_vaulting	Passenger	Neutral	passenger		Yale	No	No
LEU-0	7623	e.76623	Quaker	10	10	10766590	0	0	Mesenter_Bonded	1685	61.4375	No	0.01	Dorsal	Elevate_vaulting	Passenger	Neutral	passenger		Yale	No	No
LEU-0	7624	e.76624	Quaker	10	10	10766591	0	0	Mesenter_Bonded	1686	61.4375	No	0.01	Dorsal	Elevate_vaulting	Passenger	Neutral	passenger		Yale	No	No
LEU-0	7625	e.76625	Quaker	10	10	10766592	0	0	Mesenter_Bonded	1687	61.4375	No	0.01	Dorsal	Elevate_vaulting	Passenger	Neutral	passenger		Yale	No	No
LEU-0	7626	e.76626	Quaker	10	10	10766593	0	0	Mesenter_Bonded	1688	61.4375	No	0.01	Dorsal	Elevate_vaulting	Passenger	Neutral	passenger		Yale	No	No
LEU-0	7627	e.76627	Quaker	10	10	10766594	0	0	Mesenter_Bonded	1689	61.4375	No	0.01	Dorsal	Elevate_vaulting	Passenger	Neutral	passenger		Yale	No	No
LEU-0	7628	e.76628	Quaker	10	10	10766595	0	0	Mesenter_Bonded	1690	61.4375	No	0.01	Dorsal	Elevate_vaulting	Passenger	Neutral	passenger		Yale	No	No
LEU-0	7629	e.76629	Quaker	10	10	10766596	0	0	Mesenter_Bonded	1691	61.4375	No	0.01	Dorsal	Elevate_vaulting	Passenger	Neutral	passenger		Yale	No	No
LEU-0	8570	e.85701	Quaker	10	10	10766597	0	0	Ectoderm	1692	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8571	e.85702	Quaker	10	10	10766598	0	0	Ectoderm	1693	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8572	e.85703	Quaker	10	10	10766599	0	0	Ectoderm	1694	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8573	e.85704	Quaker	10	10	10766600	0	0	Ectoderm	1695	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8574	e.85705	Quaker	10	10	10766601	0	0	Ectoderm	1696	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8575	e.85706	Quaker	10	10	10766602	0	0	Ectoderm	1697	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8576	e.85707	Quaker	10	10	10766603	0	0	Ectoderm	1698	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8577	e.85708	Quaker	10	10	10766604	0	0	Ectoderm	1699	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8578	e.85709	Quaker	10	10	10766605	0	0	Ectoderm	1700	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8579	e.85710	Quaker	10	10	10766606	0	0	Ectoderm	1701	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8580	e.85711	Quaker	10	10	10766607	0	0	Ectoderm	1702	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8581	e.85712	Quaker	10	10	10766608	0	0	Ectoderm	1703	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8582	e.85713	Quaker	10	10	10766609	0	0	Ectoderm	1704	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8583	e.85714	Quaker	10	10	10766610	0	0	Ectoderm	1705	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8584	e.85715	Quaker	10	10	10766611	0	0	Ectoderm	1706	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8585	e.85716	Quaker	10	10	10766612	0	0	Ectoderm	1707	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8586	e.85717	Quaker	10	10	10766613	0	0	Ectoderm	1708	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8587	e.85718	Quaker	10	10	10766614	0	0	Ectoderm	1709	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8588	e.85719	Quaker	10	10	10766615	0	0	Ectoderm	1710	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8589	e.85720	Quaker	10	10	10766616	0	0	Ectoderm	1711	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8590	e.85721	Quaker	10	10	10766617	0	0	Ectoderm	1712	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8591	e.85722	Quaker	10	10	10766618	0	0	Ectoderm	1713	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8592	e.85723	Quaker	10	10	10766619	0	0	Ectoderm	1714	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8593	e.85724	Quaker	10	10	10766620	0	0	Ectoderm	1715	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8594	e.85725	Quaker	10	10	10766621	0	0	Ectoderm	1716	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8595	e.85726	Quaker	10	10	10766622	0	0	Ectoderm	1717	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8596	e.85727	Quaker	10	10	10766623	0	0	Ectoderm	1718	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8597	e.85728	Quaker	10	10	10766624	0	0	Ectoderm	1719	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8598	e.85729	Quaker	10	10	10766625	0	0	Ectoderm	1720	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8599	e.85730	Quaker	10	10	10766626	0	0	Ectoderm	1721	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8600	e.85731	Quaker	10	10	10766627	0	0	Ectoderm	1722	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8601	e.85732	Quaker	10	10	10766628	0	0	Ectoderm	1723	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8602	e.85733	Quaker	10	10	10766629	0	0	Ectoderm	1724	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8603	e.85734	Quaker	10	10	10766630	0	0	Ectoderm	1725	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8604	e.85735	Quaker	10	10	10766631	0	0	Ectoderm	1726	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8605	e.85736	Quaker	10	10	10766632	0	0	Ectoderm	1727	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8606	e.85737	Quaker	10	10	10766633	0	0	Ectoderm	1728	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8607	e.85738	Quaker	10	10	10766634	0	0	Ectoderm	1729	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8608	e.85739	Quaker	10	10	10766635	0	0	Ectoderm	1730	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8609	e.85740	Quaker	10	10	10766636	0	0	Ectoderm	1731	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8610	e.85741	Quaker	10	10	10766637	0	0	Ectoderm	1732	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8611	e.85742	Quaker	10	10	10766638	0	0	Ectoderm	1733	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8612	e.85743	Quaker	10	10	10766639	0	0	Ectoderm	1734	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8613	e.85744	Quaker	10	10	10766640	0	0	Ectoderm	1735	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8614	e.85745	Quaker	10	10	10766641	0	0	Ectoderm	1736	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8615	e.85746	Quaker	10	10	10766642	0	0	Ectoderm	1737	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8616	e.85747	Quaker	10	10	10766643	0	0	Ectoderm	1738	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8617	e.85748	Quaker	10	10	10766644	0	0	Ectoderm	1739	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8618	e.85749	Quaker	10	10	10766645	0	0	Ectoderm	1740	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8619	e.85750	Quaker	10	10	10766646	0	0	Ectoderm	1741	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8620	e.85751	Quaker	10	10	10766647	0	0	Ectoderm	1742	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8621	e.85752	Quaker	10	10	10766648	0	0	Ectoderm	1743	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8622	e.85753	Quaker	10	10	10766649	0	0	Ectoderm	1744	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8623	e.85754	Quaker	10	10	10766650	0	0	Ectoderm	1745	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8624	e.85755	Quaker	10	10	10766651	0	0	Ectoderm	1746	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8625	e.85756	Quaker	10	10	10766652	0	0	Ectoderm	1747	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8626	e.85757	Quaker	10	10	10766653	0	0	Ectoderm	1748	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8627	e.85758	Quaker	10	10	10766654	0	0	Ectoderm	1749	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8628	e.85759	Quaker	10	10	10766655	0	0	Ectoderm	1750	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8629	e.85760	Quaker	10	10	10766656	0	0	Ectoderm	1751	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8630	e.85761	Quaker	10	10	10766657	0	0	Ectoderm	1752	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8631	e.85762	Quaker	10	10	10766658	0	0	Ectoderm	1753	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8632	e.85763	Quaker	10	10	10766659	0	0	Ectoderm	1754	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8633	e.85764	Quaker	10	10	10766660	0	0	Ectoderm	1755	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8634	e.85765	Quaker	10	10	10766661	0	0	Ectoderm	1756	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8635	e.85766	Quaker	10	10	10766662	0	0	Ectoderm	1757	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8636	e.85767	Quaker	10	10	10766663	0	0	Ectoderm	1758	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8637	e.85768	Quaker	10	10	10766664	0	0	Ectoderm	1759	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8638	e.85769	Quaker	10	10	10766665	0	0	Ectoderm	1760	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8639	e.85770	Quaker	10	10	10766666	0	0	Ectoderm	1761	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8640	e.85771	Quaker	10	10	10766667	0	0	Ectoderm	1762	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8641	e.85772	Quaker	10	10	10766668	0	0	Ectoderm	1763	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8642	e.85773	Quaker	10	10	10766669	0	0	Ectoderm	1764	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8643	e.85774	Quaker	10	10	10766670	0	0	Ectoderm	1765	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8644	e.85775	Quaker	10	10	10766671	0	0	Ectoderm	1766	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8645	e.85776	Quaker	10	10	10766672	0	0	Ectoderm	1767	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8646	e.85777	Quaker	10	10	10766673	0	0	Ectoderm	1768	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8647	e.85778	Quaker	10	10	10766674	0	0	Ectoderm	1769	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8648	e.85779	Quaker	10	10	10766675	0	0	Ectoderm	1770	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8649	e.85780	Quaker	10	10	10766676	0	0	Ectoderm	1771	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8650	e.85781	Quaker	10	10	10766677	0	0	Ectoderm	1772	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8651	e.85782	Quaker	10	10	10766678	0	0	Ectoderm	1773	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8652	e.85783	Quaker	10	10	10766679	0	0	Ectoderm	1774	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8653	e.85784	Quaker	10	10	10766680	0	0	Ectoderm	1775	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8654	e.85785	Quaker	10	10	10766681	0	0	Ectoderm	1776	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8655	e.85786	Quaker	10	10	10766682	0	0	Ectoderm	1777	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8656	e.85787	Quaker	10	10	10766683	0	0	Ectoderm	1778	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8657	e.85788	Quaker	10	10	10766684	0	0	Ectoderm	1779	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8658	e.85789	Quaker	10	10	10766685	0	0	Ectoderm	1780	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8659	e.85790	Quaker	10	10	10766686	0	0	Ectoderm	1781	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8660	e.85791	Quaker	10	10	10766687	0	0	Ectoderm	1782	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8661	e.85792	Quaker	10	10	10766688	0	0	Ectoderm	1783	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8662	e.85793	Quaker	10	10	10766689	0	0	Ectoderm	1784	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8663	e.85794	Quaker	10	10	10766690	0	0	Ectoderm	1785	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8664	e.85795	Quaker	10	10	10766691	0	0	Ectoderm	1786	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8665	e.85796	Quaker	10	10	10766692	0	0	Ectoderm	1787	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8666	e.85797	Quaker	10	10	10766693	0	0	Ectoderm	1788	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8667	e.85798	Quaker	10	10	10766694	0	0	Ectoderm	1789	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8668	e.85799	Quaker	10	10	10766695	0	0	Ectoderm	1790	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8669	e.85800	Quaker	10	10	10766696	0	0	Ectoderm	1791	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8670	e.85801	Quaker	10	10	10766697	0	0	Ectoderm	1792	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8671	e.85802	Quaker	10	10	10766698	0	0	Ectoderm	1793	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8672	e.85803	Quaker	10	10	10766699	0	0	Ectoderm	1794	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8673	e.85804	Quaker	10	10	10766700	0	0	Ectoderm	1795	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8674	e.85805	Quaker	10	10	10766701	0	0	Ectoderm	1796	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8675	e.85806	Quaker	10	10	10766702	0	0	Ectoderm	1797	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8676	e.85807	Quaker	10	10	10766703	0	0	Ectoderm	1798	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8677	e.85808	Quaker	10	10	10766704	0	0	Ectoderm	1799	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8678	e.85809	Quaker	10	10	10766705	0	0	Ectoderm	1800	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8679	e.85810	Quaker	10	10	10766706	0	0	Ectoderm	1801	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8680	e.85811	Quaker	10	10	10766707	0	0	Ectoderm	1802	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8681	e.85812	Quaker	10	10	10766708	0	0	Ectoderm	1803	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8682	e.85813	Quaker	10	10	10766709	0	0	Ectoderm	1804	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8683	e.85814	Quaker	10	10	10766710	0	0	Ectoderm	1805	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8684	e.85815	Quaker	10	10	10766711	0	0	Ectoderm	1806	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8685	e.85816	Quaker	10	10	10766712	0	0	Ectoderm	1807	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8686	e.85817	Quaker	10	10	10766713	0	0	Ectoderm	1808	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8687	e.85818	Quaker	10	10	10766714	0	0	Ectoderm	1809	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8688	e.85819	Quaker	10	10	10766715	0	0	Ectoderm	1810	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8689	e.85820	Quaker	10	10	10766716	0	0	Ectoderm	1811	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8690	e.85821	Quaker	10	10	10766717	0	0	Ectoderm	1812	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8691	e.85822	Quaker	10	10	10766718	0	0	Ectoderm	1813	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8692	e.85823	Quaker	10	10	10766719	0	0	Ectoderm	1814	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8693	e.85824	Quaker	10	10	10766720	0	0	Ectoderm	1815	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8694	e.85825	Quaker	10	10	10766721	0	0	Ectoderm	1816	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8695	e.85826	Quaker	10	10	10766722	0	0	Ectoderm	1817	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8696	e.85827	Quaker	10	10	10766723	0	0	Ectoderm	1818	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8697	e.85828	Quaker	10	10	10766724	0	0	Ectoderm	1819	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8698	e.85829	Quaker	10	10	10766725	0	0	Ectoderm	1820	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8699	e.85830	Quaker	10	10	10766726	0	0	Ectoderm	1821	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8700	e.85831	Quaker	10	10	10766727	0	0	Ectoderm	1822	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8701	e.85832	Quaker	10	10	10766728	0	0	Ectoderm	1823	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8702	e.85833	Quaker	10	10	10766729	0	0	Ectoderm	1824	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8703	e.85834	Quaker	10	10	10766730	0	0	Ectoderm	1825	61.4375	No	0.01	Ectoderm						Yale	No	No
LEU-0	8704	e.85835	Quaker	10	10