Laboratory Genetic Units (GenUs)
October 2012
Note internal transport of DNA/cell culture samples between co-located laboratories should not be counted as exports.

Band	GenU Score	General examples	Specific examples
A	**1**	§ All DNA extractions to include o extract > test locally o extract > DNA banking § All RNA extraction	
		§ Sample receipt, booking in, and processing of blood sample, haematological blood/bone marrow sample, PET samples. Covers: o Sample preparation, setting up of culture(s) and processing of sample to provide a cell suspension for cytogenetic analyses, processing of PET samples for FISH ***or*** o DNA extraction and banking for molecular studies	§ Samples processed for both Cytogenetic and Molecular Genetic Studies are considered as separate. § Interpretation/undertaking segregation of results from another laboratory. § Re-issue of report for sample previously tested (repeat request for same test).
A	**1**	§ DNA/cell culture sample export	
		§ Cell freezing/storage	§ Freezing/storage in liquid nitrogen. This is a one-off charge for long-term storage.
B	**2**	§ Single amplicon (genotyping or sequencing)	§ FraX PCR § Haemochromatosis § Factor V § Jak2 § HD (diagnostic and predictive tests) § Other triplet disorders where a single PCR is required (eg SBMA) § Y deletions § FLT3 § NPM1
		§ Sample receipt, booking in, and processing of amniotic fluid sample, CV sample, solid tissue sample, lymph node, tumour sample. Covers: o sample preparation, setting up of culture(s) and processing of sample to provide a cell suspension for cytogenetic analyses § Embryo preparation of PGD analysis	
C	**4**	§ Genotyping 2-4 amplicons § Sequencing: Very small gene with 2-4 exons/amplicons § Sequencing: Predictive tests, confirmations and carrier tests § MS-PCR	§ CF-ARMS, CF-OLA, CF-HT § AS/PWS § FraX if Southern blotted § DM, Friedreich's ataxia

Band	GenU Score	General examples	Specific examples
		§ MLPA with no other test (including DMD) § Prenatal tests to include the MCC § 1 lane on Southern § Triplet disorders that require two PCRs (allele specific and TP-PCR) § Aneuploidy (to include 13, 18, 21 and X/Y) § Identity/paternity tests	§ RT PCR BCR/ABL1
		§ Direct CVS analysis § Rapid aneuploidy (to include 13, 18, 21 and X/Y (QF-PCR /FISH) § Simple FISH test defined as a single interpretative event using commercial probe/kit § Kit based MLPA § Targeted array CGH follow up studies	§ Includes slide making/G-banding and FISH preparation § Microdeletion testing § Break apart probes § Fusion probes (includes BCR/ABL) § Post bone marrow transplant XY donor scoring § Targeted array CGH follow up can be by FISH or aCGH
D	**7**	§ Blood, Amniotic fluid, CVS culture, or Solid Tissue G-band constitutional analysis § Haematological (marrow, blood, lymph node, effusion) or tumour G-band analysis	§ Includes slide making and G-banding § G-band analysis appropriate to referral reason and if necessary other conventional staining (eg C band, NOR) to aid interpretation.
E	**10**	§ 5-19 amplicons (MLPA to count as 2 amplicons when part of full screen) § All linkage tests including UPD	§ Sequencing MECP2 § DMD linkage § AS/PWS if linked markers used
		§ Array CGH (whole genome analysis) § Chromosome breakage studies, eg FA, AT § Combined FISH analysis of probes that must be applied and interpreted together to provide a single diagnostic/prognostic report	§ Includes processing steps post DNA extraction. § Includes SCE preparation and analysis for FA and scanning for chromosome 7 and 14 rearrangements for AT. § FISH panels typically 2-4 probes e.g CLL FISH panel; most NHL FISH panels; MLL, BCR-ABL & ETV6-RUNX1applied to presentation ALL; myeloma limited to clinically relevant abnormalities.
F	**15**	§ 20-49 amplicons (MLPA to count as 2 amplicons when part of full screen)	§ Sequencing factor 8
G	**25**	§ 50-100 amplicons (MLPA to count as 2 amplicons when part of full screen)	§ Sequencing FBN1 § Sequencing BRCA1+BRCA2
H	**40**	§ Over 100 amplicons	§ Sequencing a group of genes in parallel that contribute to a single report