**UW Medicine - Pathology**

400-11-01-01

Array Comparative Genome Hybridization (aCGH) Testing Procedure

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| Adopted Date: 10/12/09  Review Date: 02/14/10  Revision Date: 05/03/11 |

PURPOSE

To properly handle material to get DNA from different cytogenetics specimens.

PROCEDURE

1. **Initial Sample Handling For Microarray Cgh Testing**

### Specimen Requirement

### **Peripheral Blood** (Keep blood samples at room temperature and deliver to laboratory as soon as possible): 2 tubes of blood REQUIRED, 3-5ml whole blood in EDTA (purple top) and 3-5ml whole blood in sodium heparin (green top).

1. Amniotic Fluid (Keep amniotic fluid samples at room temperature and deliver to laboratory as soon as possible): 15-20ml of amniotic fluid OR 2 T-75 flasks that are 70% confluent. **NOTE**: only if not previously done, karyotype analysis will be performed together with aCGH, requiring 30ml of fluid.
2. Chorionic Villi (Keep CVS fluid samples at room temperature and deliver to laboratory as soon as possible, and collect chorionic villi in a sterile flask or tube with sterile tissue culture media): 3 T-25 flasks that are 70% confluent OR 2 T-25 flasks that are 100% confluent.
3. Solid Tissue (Products of Conception, Skin biopsies, Stillbirths) (Keep samples refrigerated or on ice and deliver to laboratory as soon as possible.): 15-20mg of tissue in sterile media or 2 T-75 flasks that are 70% confluent.
4. DNA Samples: Send 20-30 micrograms of DNA suspended in TE-buffer.

### Procedures

* + 1. **Sample receiving and culture setup:** for detail see lab manual Chapter 2 (page: 14-23)
  1. Log into MC book and give it MC # and date stamp
  2. Record sample condition on the Sample Processing/Report Form for Array CGH
  3. Set up culture for FISH/karyotype confirmation with fixed cell pellet
     1. Peripheral blood: green top tube per blood culture protocol, both A1 and A2 cultures (p23-27)
     2. Amniotic fluid and chorionic villi samples: coverslips and mass culture (p15-22)
  4. Store purple top tube (5ml for blood) or AF tube (15ml for AF) at 4°C and solid tissue at -80°C for DNA extraction
  5. Inform the technologist for DNA extraction (see cytogenetics lab manual page 136 for DNA extraction protocol)

2. **Case/Sample Login for GCS and Genoglyphix**

* 1. Put the case file in office for GCS log in
  2. Check if any previous or concurrent cytogenetic studies have been performed.
     1. Case numbers are noted here, and
     2. copies of past cytogenetic studies are placed in the patient folder
  3. Print out multiple labels for files
  4. Login Genoglyphix to add subject and full description of indications for testing by
     1. Log onto Genoglyphix ([www.genoglyphix.com](http://www.genoglyphix.com)) using the login and password provided by Signature Genomic Laboratories.
     2. Click on Add Subject List to add
        1. Subject ID with UWMC case number
        2. Sex of the patient
        3. Referring physician
        4. DOB
        5. Check prenatal sample box for STAT treatment
        6. Full description of indications
        7. In the box of "Enter a new tag" add sample type as PB, AF, or CVS
        8. Then, click Add Subject

Written By: Director Approval:

(Signature and Date) (Signature and Date)

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**SIGNATURE PAGE FOR POLICIES AND PROCEDURES**

Procedure / Policy Title: Array Comparative Genome Hybridization (aCGH) Testing

Procedure / Policy Number: 400-11-01-01

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