# NCI Patient-Derived Models Repository (PDMR) Naming Convention and Data Availability

Effective Date: 9/1/2026

**Visit the PDMR website for more information:**

https://pdmr.cancer.gov/

Contact Us:

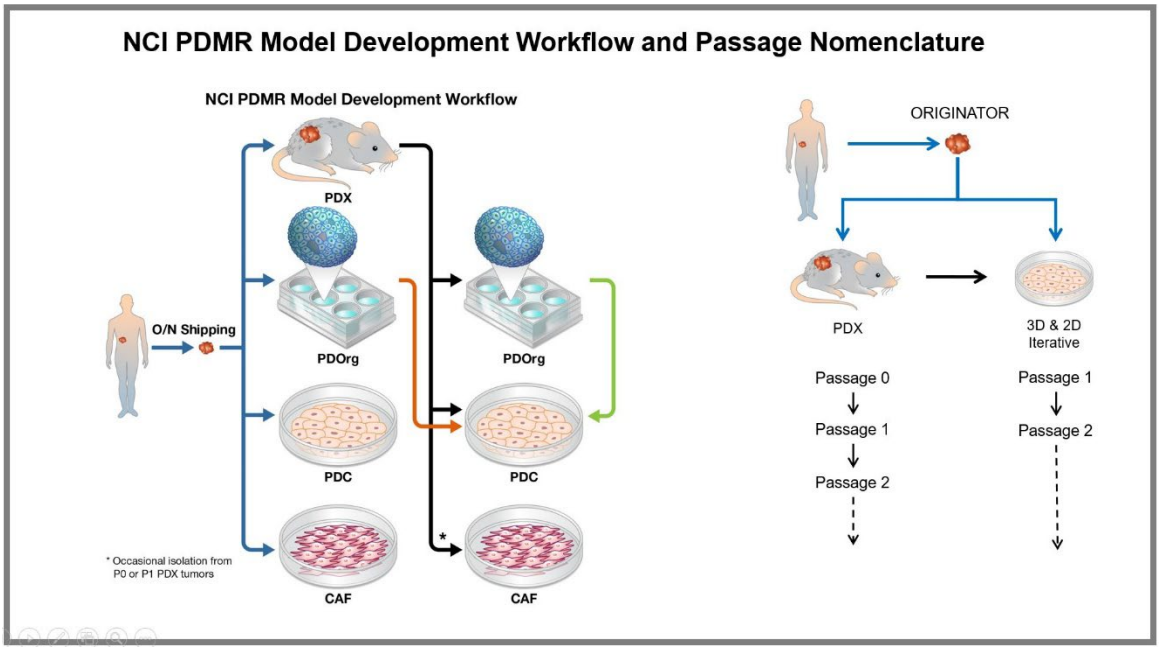
NCI Patient-Derived Models Repository - NCI_PDM_Repository@mail.nih.gov

PDMR NCI Patient-Derived Models Repository
An NCI Precision Oncology Initiative℠ Resource

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## Overview




- Patient-derived xenograft (PDX), organoid (PDOrg), cell line (PDC), and cancer-associated fibroblast (CAF) models can be developed directly from patient material; PDOrgs, PDCs, and CAFs can also be developed from a PDX model; and PDCs can be developed from PDOrgs (see figure).

## PDMR Model Naming Structure

- The NCI PDMR naming structure was developed to track each enrolled patient with a unique 6-digit randomized identifier and each collected specimen with a 3-digit collection code and letter indicating the type of tissue collected for model generation.
  - "T" = 18-guage tissue biopsy
  - "R" = resected material
  - "B" = blood-origin/circulating tumor cells
  - "M" = malignant effusions
- This combination (123456-000-R) gives a unique identifier to every specimen collected from enrolled patients and is used to create the unique distribution lot identifier.
- Originator material is the specimen obtained directly from the cancer patient.
  - PDX model nomenclature begins with passage 0 (P0) which represents tumor material obtained from a mouse that was implanted with Originator material and allowed to grow.

- PDXs (samples) are generally serial passaged subcutaneously, and the lineage can be tracked using the host-mouse identifier (an alphanumeric 3-digit identifier). The PDMR defines passage 0 (P0) as the first mouse implanted with the original human specimen. So, a P2 PDX would have a total of 9 digits if it was serially passaged (**A12**BC3**D4E**).
    - A PDX generated through an alternate implant site, not subcutaneous, will have the letters "AL" after the PDX name, and a note will be listed in the Specimen Notes defining the alternate implant location.
    - A PDX generated by regrowth from a viably cryo-preserved fragment, will have the letters "RG" after the PDX name. For instance, **A12**BC3_**RG-D4E** would indicate that the P2 tumor was generated from a regrowth of a cryopreserved fragment from the P1 tumor **A12**BC3.
    - A sample labeled "Originator" represents the provided patient material and will at the minimum include pathological assessment. Sequence data will also be available if there was sufficient tissue.
    - Tumors with a tendency for early necrosis resulting in a hollow, liquid-filled mass are sometimes pooled to try to rescue the line and implanted in an alternate site such as mammary fat pad. If the model was successfully developed, the passage number and the word "POOL" will be listed instead of a mouse ID. For example, P1POOL_AL-UT7 indicates a model where multiple P0 samples were pooled for a P1 implant at an alternative implant site in the tumor UT7.
    - There are some exceptions to these rules as early in the PDMR development we did not truly appreciate the complexity that would result. In those cases, alternate implant sites such as mammary fat pad or thigh muscle are noted in the Specimen Notes section, but may not be represented in the PDX name.
- PDOrg, PDC, and CAF cultures (samples) are defined simply by addition of the model type as the Sample Name (e.g., 123456-000-R-J1-PDC). The first in vitro passage is P1 representing the first time that patient-derived tissues has been cultured in vitro, irrespective of the tumor tissue origin (patient/PDX). Details on the specific tissue used to generate an in vitro culture are provided in the database. If a 2D culture is derived from an organoid culture, the passage is iterative to the organoid passage number (see image above).

## Types of Data Available

### Patient

- Diagnosis by CTEP SDC Code (sub-set of MEDdra disease codes) and OncoTree Code
- Diagnosis sub-type
- Sex
- Date of Diagnosis (MM/YYYY only)
- Age at Diagnosis

- Known Metastatic Sites
- Limited Medical Information
    - Current and Prior Therapies
    - Known Genetic Mutations and Tumor Markers of Patient
    - Additional Medical History
- Social History
    - Self-reported Race/Ethnicity
    - Occupation
    - Smoking History
- Specimens Collected for PDMR

## Patient Specimen Information

- Collection Procedure (e.g., biopsy, resection)
- Biopsy/Resection Site
- Date and Age at Collection
- Summary of Results for Human Pathogens
- Specimen Notes: may include PDX IHC/Pathology findings of interest for model or alternate implant methodologies (if not subcutaneous)
- Distribution Lot Availability
- Representative PDX Growth Curve by Passage (Median Tumor Volume)
- Additional NGS characterization (if provided): MSI status, HLA Profile(s), PAM50 Classifier, CMS Classifier, Fusions

## Sample

- Samples include representative individual PDXs from a model, in vitro culture details, and when available, the originating patient material for the provided specimen
    - Passage number (P0 represented first implant)
    - PDM Type (e.g., PDX, Originator, PDOrg…)
    - Pathology Data including 4x and 20x images, percent observed tumor content, percent necrosis, percent stromal component, and brief pathology write-up
    - For in vitro cultures, specific media used, tumorgenicity results, and growth details
    - List of available Sequence files including Whole Exome and RNASeq. Affymetrix data are currently not available
    - Detailed List of Variant Calls Using OncoKB variant caller