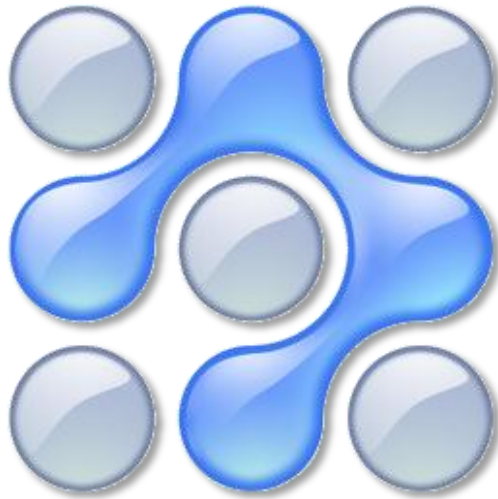




# Forecasting the demand of a new drug:

## Drug Analog Based Forecasting Tool



## U.S. Market Data

### Drug Analog Based Forecasting

Forecasting the demand of a new drug is tricky because it has no history/historical commercial data that can be used to predict the future. Analogs play an important role in helping the forecast teams build a forecast model to estimate the sales of the new drug.

### What is a Drug Brand Analog?

Drug brands already available in the market that are similar to the product of interest in terms of disease type (chronic/acute), order of entry into the market (by treatment and drug class), efficacy rate, dosage form, dosing, route of administration, drug class, side effects, contraindications, safety, drug cost per day, days of therapy, sales data (historical and forecast) etc.

### Selecting the Right Drug Brand for Analog Based Forecasting

Screening a right brand drug for analog based forecasting for your drug of interest is a challenging and time consuming task. Also, it is almost impossible to find analogs that match the product of interest in all of these parameters. The solution is to study several analogs on common attributes in order to create a forecast model for a new product.

The prime objective of this tool is to help our clients get instant access to qualitative and quantitative (sales data for U.S. in millions) data for drug brands that they intend to study as analogs while forecasting new drugs.

# PUKKA allows you to view drug brand's qualitative data under following 36 headings:

Brand

Contraindications

Drug Half Life In Hours

Cost per Day In USD

Molecule

Disease Severity Rate

Efficacy Rate

Adherence Rate

Disease Condition

Disease Prevalence  
Rate

Order of Entry by  
Treatment Option

Persistence Rate

Clinical Manifestation

Disease Incidence  
Rate

Order of Entry by  
Drug Class

Reimbursement  
Status

Treatment Type

Orphan Designation

Approval Month/Year

Current Ownership

PRN Status

Pharmacologic Class

Launch Month/Year

Clinical Trials Count

Disease Category

Fixed Dose  
Combination

Patent Expiry  
Month/Year

Indication

Formulation Type

Line of Therapy

Indication Specificity

Dosage Form

Dosing Frequency

Side Adverse / Effects

Route of  
Administration

Days of Therapy

**PUKKA allows you to search relevant analog brands by selecting multiple options mentioned below:**

Disease Condition

Disease Severity Rate

Drug Half Life In Hours

Cost per Day In USD

Clinical Manifestation

Disease Prevalence  
Rate

Efficacy Rate

Adherence Rate

Treatment Type

Disease Incidence  
Rate

Order of Entry by  
Treatment Option

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Dosing Frequency

Route of  
Administration

Days of Therapy

Dosage Form

# PUKKA gives you access to 100 plus drug brands approved in U.S. from 2005 up to 2012 for single indication:

Arranon	Cervarix	Zelboraf	Synribo	Onglyza	Trilipix	Tyzeka	Treximet	Qsymia	Kuvan
Gardasil	Folotyn	Zytiga	Xtandi	Kombiglyze XR	Adcirca	Veregen	Egrifta	Belviq	Chantix
Sprycel	Istodax	Bosulif	Zaltrap	Victoza	Effient	Isentress	Difcid	Stendra	Arcalyst
Vectibix	Halaven	Erivedge	Janumet	Levemir	Multaq	Prezista	Edurant	Banzel	Nplate
Ixempra	Jevtana	Cometriq	Januvia	Actoplus Met	Tyvaso	Complera	Firazyr	Kalydeco	Uloric
Tasigna	Provenge	Inlyta	Tradjenta	Ranexa	Tribenzor	Intelence	Cinryze	Dymista	Ampyra
Torisel	Erwinaze	Kyprolis	Jentadueto	Azor	Brilinta	Selzentry	Kalbitor	Stribild	Benlysta
Tykerb	Lazanda	Marqibo	Byetta	Letairis	Juxtapid	Veramyst	Gralise	Atripla	Myrbetriq
Sancuso	Xalkori	Perjeta	Symmlin/Symmlin Pen	Tekturna	Vascepa	Rotarix	Zipsor	Exjade	Aubagio
Arzerra	Yervoy	Picato	Bydureon	Cleviprex	Baraclude	Boostrix	Cambia	Naglazyme	Xeljanz

- Every year our team adds drug brands to PUKKA's repository approved in consecutive years.
- *PUKKA displays only those drugs brands that have at least 3 years of historical sales data.*

**Brief Research Methodology:**

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graph TD
    A[Qualitative & Quantitative Research] --> B[Desk/Secondary Research]
    B --> C[Primary Research]
    C --> D[Data Validation]
    D --> E[Data Triangulation]
    E --> F[Final Data presentation to industry experts and analysts as the final forecasting tool.]
    E --> G[In case of conflicting views, the data is re-collected or Data Revalidation is Done before clearing it for Forecasting tool.]
    
```

Research Step	Research Approach	Qualitative & Quantitative Data
Step I	Desk/Secondary Research	Includes data gathering from Annual Reports, SEC Filings, Paid Databases, Industry Magazines, Paid Scientific Articles, Orange Electronic Book, Purple Book, U.S.-FDA Accessdata, Clinical trials.gov, WHO, etc.
Step II	Primary Research	Parallel to the desk research process, surveys are conducted across different stakeholders through multiple channels such as: <ul style="list-style-type: none"> <li>• Online-web (CATI/CAWI/CAPs)</li> <li>• Telephonic and video conference sessions</li> <li>• Interviews Field Effort: All interviewees are c-level, d-level, VP level and senior management</li> <li>• Target information: validation of secondary findings; cross-verification of other primary interviews,</li> <li>• Organization - Research Institutes, Manufacturers, Distributors, Resellers</li> </ul>
Step III	Data Validation	Data validation is completed through primary research that includes telephonic or face-to-face interviews with domain experts, industry experts and our own select panel of key opinion leaders from pharmaceutical industry. At this point our market estimates and forecast for drug brands reach finalization.
Step IV	Data Triangulation	The final phase of our research and drug brand forecast includes internal data triangulation and modelling techniques that take into account the overall trends and dynamics of the industry (PESTLE analysis) and may include multiple statistical modelling techniques as well.



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Attributes	Description
Brand	A proprietary drug that has a trade name and is protected by a patent (can be produced and sold only by the company holding the patent).
Molecule	The simplest structural unit of an element or compound.
Fixed Dose Combination	Medicines containing two or more active components in fixed proportions in a single dosage form.
Formulation Type	The process in which different chemical substances, including the active drug, are combined to produce a final medicinal product. The word formulation is often used in a way that includes dosage form. Example: Enteral, Parenteral, Topical, etc.
Dosage Form	Pharmaceutical drug products in the form in which they are marketed for use, typically involving a mixture of active drug components and nondrug components (excipients), along with other non-reusable material that may not be considered either ingredient or packaging. Example: Tablet, Capsule, Syrup, Infusion, Injection, etc.
Route of Administration	The path by which a drug, fluid, poison, or other substance is taken into the body. Routes of administration are generally classified by the location at which the substance is applied. Common examples include oral and intravenous administration.
Drug Half Life	This is the period of time required for the concentration or amount of drug in the body to be reduced by one-half. We usually consider the half life of a drug in relation to the amount of the drug in plasma. A drug's plasma half-life depends on how quickly the drug is eliminated from the plasma.
Side Effects/Adverse effect	In medicine, an adverse effect is an undesired harmful effect resulting from a medication or other intervention such as surgery. An adverse effect may be termed a 'side effect', when judged to be secondary to a main or therapeutic effect.
Efficacy Rate (%): Complete response	In medical terms, efficacy rate refers to the ability of a product to provide an expected beneficial effect when administered to 100 patients.

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**Q1. What does the name PUKKA denote?**

It's a Hindi word and means everything is genuine, bona fide, original, finished, complete. As the name "PUKKA" suggests our database is genuine, complete, verified by industry experts and of high quality.

**Q2. What is the purpose of this tool, PUKKA?**

The purpose of PUKKA is to help our esteemed clients select appropriate drug brand analogs for carrying out forecasting studies for their pipeline molecules. There are multiple drug brand attributes (listed in the table Client's selection criteria) considered while screening analogs of interest. PUKKA gives clients instant access to qualitative and quantitative data that is captured for more than 100 drug brands approved and launched in U.S. Along with critical qualitative data PUKKA also gives access to sales data in USD millions for drug brands since their launch in U.S. up to 2022 (forecast period: 2016 – 2022).

**Q3. Why only U.S. is considered while mapping the data in this tool?**

There are multiple reasons that govern our intention on mapping the data for U.S. territory only. They are as follows:

- U.S. is the major pharma drugs market by value making it the prime territory of choice for our clients to launch their products.
- Analog selected and analyzed by specific territory (here U.S.) tends to yield more accurate results since the drug brand update is governed by various territorial market dynamics such as drug approval year, launch year, patent expiry year, label changes, patent term extension, etc.
- PUKKA captures the historical sales data of drug brands since their launch up to 2015 and forecast from 2016 up to 2022 for U.S. This complements the point mentioned above, since it expands our client's job of analyzing their molecule/product of interest for U.S. market by studying the sales performance of selected analogs.
- While forecasting the sales of drug brands the analyst team needs to keep tabs on the competitors/other brands that would enter/exist/lose patent impacting the sales forecast of the brand of interest. Since these parameters are time bound and specific to territory, it would be recommended by industry experts and our in-house SMEs (Subject Matter Experts) that a country/territory specific analog data should be built for more accurate outcomes.

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