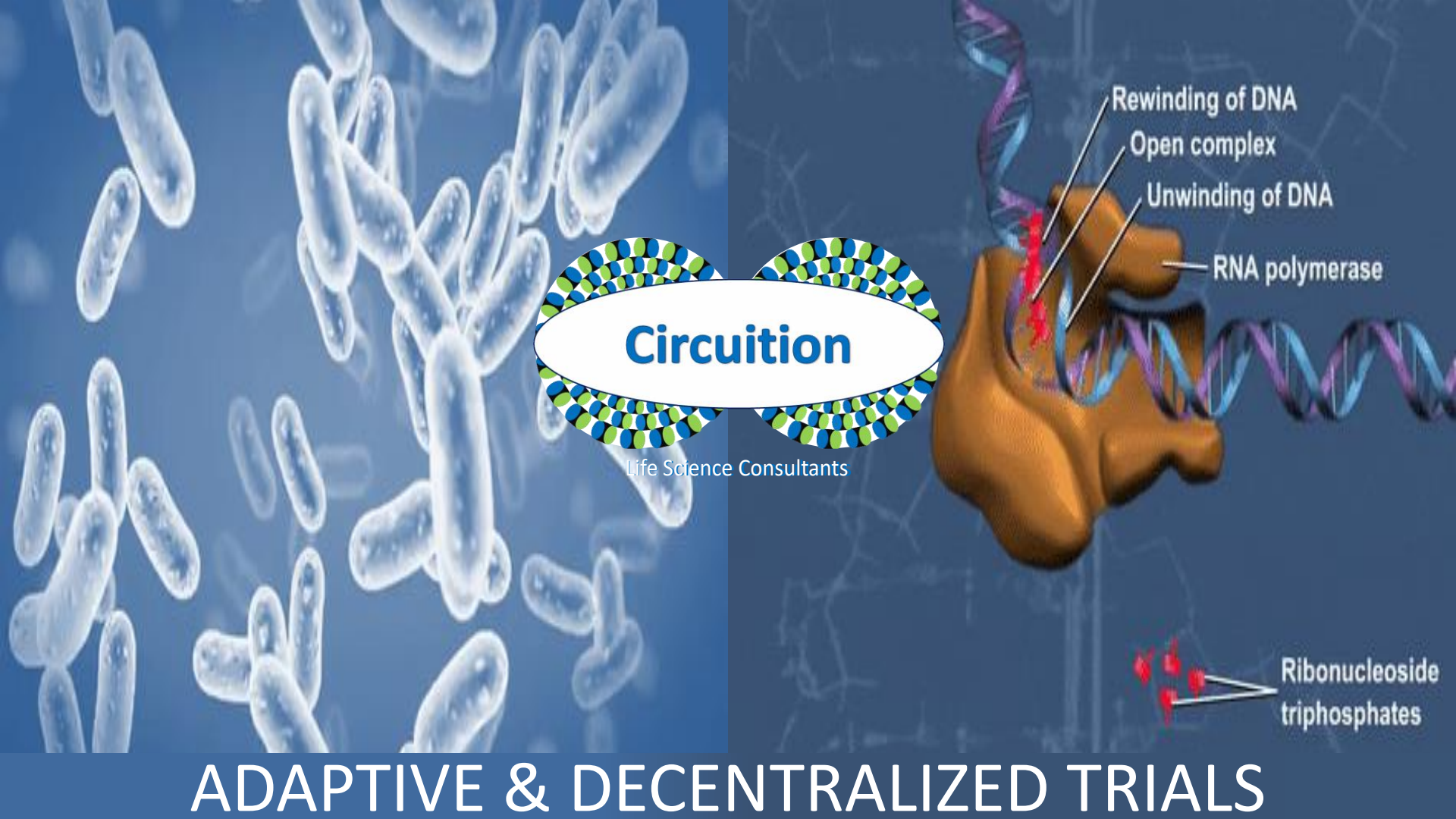




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Life Science Consultants

ADAPTIVE & DECENTRALIZED TRIALS

Agenda

What happens

Decentralized trials

Adaptive trials

What happens

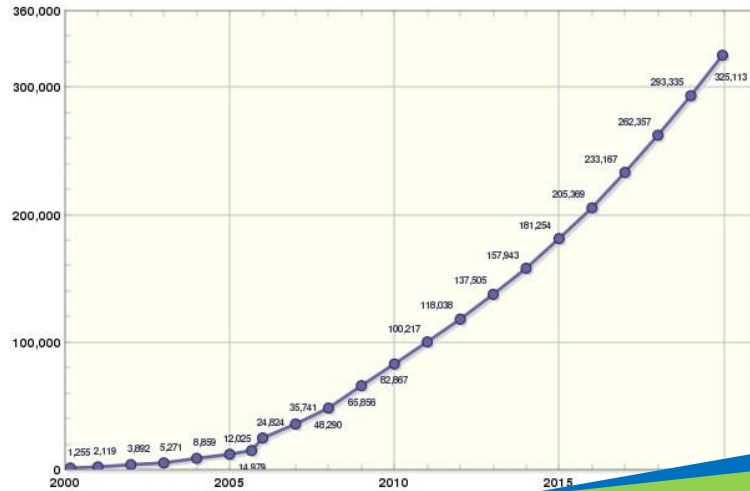
Decentral Trials

Adaptive Trials

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What happens

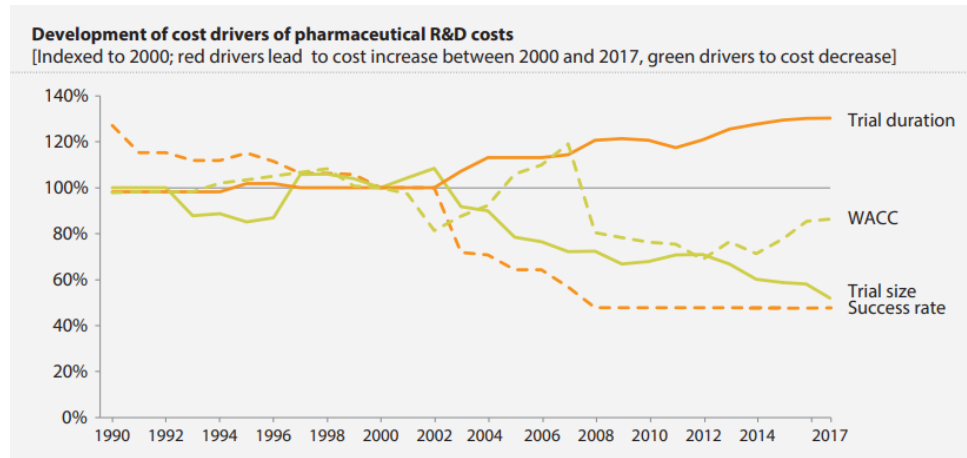
Product differentiation



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What happens

Clinical Trial Impact



Gupta Strategists on the cost of Life science opportunity

Agility & Speed

Without linear cost increase

Circuition

Agenda

What happens

Decentral Trials

Adaptive Trials

What happens

Decentralized trials

Adaptive trials

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Decentralized Trials

The value case

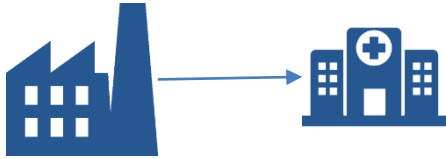


- Travel relieve for patients
- Reduced hospitalized feeling for patients
- Relieve hospital burden during pandemic/Lock-down
- Sites stay focused on severe cases
- Subject enrolment beyond site region
- No hospital storage needed
- Overall inventory reduction
- Reduction of practice variability

Decentralized Trials

Different designs

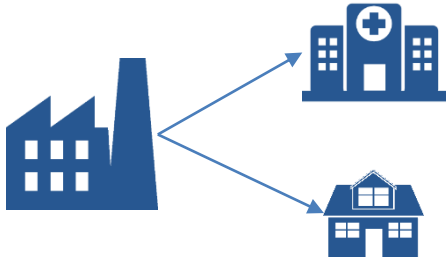
Centralized model



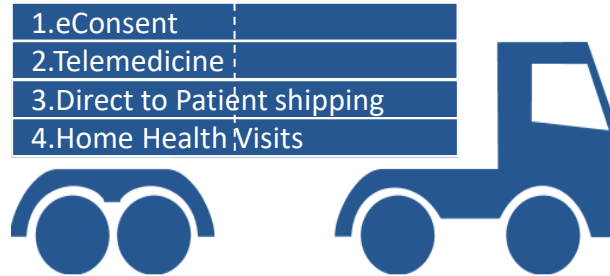
1. Informed consent
2. Investigator contact
3. Site Pharmacy dispensing
4. Hospital nursing
5. Hospital health records
6. Central lab utilization
7. Trained hospital staff
8. Site monitoring



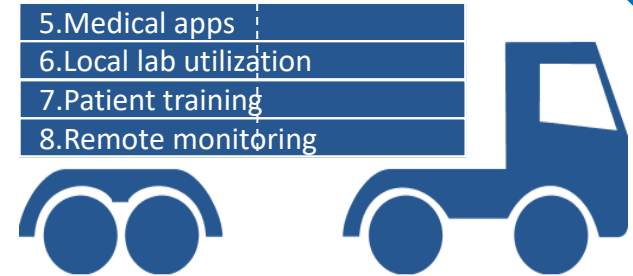
De-centralized model



1. eConsent
2. Telemedicine
3. Direct to Patient shipping
4. Home Health Visits



5. Medical apps
6. Local lab utilization
7. Patient training
8. Remote monitoring



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Decentralized Trials

Clinical Supply Impact

- Protocols mentioning (optional) direct to patient dispensing (risk analysis)
- D2P / S2P regional approach
- Pharmacy Manual & Trial Medication Manual
- Virtual Pharmacist dispense release or central pharmacist
- HIPPA/GDPR compliant subject directory not owned by sponsor
- Increase of courier transports
- Increase of temperature monitors / Home storage capability
- Treatment adherence monitoring

Agenda

What happens

Decentral Trials

Adaptive Trials

What happens

Decentralized trials

Adaptive trials

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Adaptive Trials

The value case

- More **efficient**,
- More **informative**
- More **ethical**

- Recruitment to futile treatment arms may stop early.
- Fewer patients may be randomised to a less promising treatment or dose.
- On average, fewer patients may be required overall to ensure the same high chance of getting the right answer.
- An underpowered trial, which would mean a waste of resources, may be prevented.
- A better understanding of the dose–response or dose–toxicity relationship may be achieved, thus, facilitating the identification of a safe and effective dose to use clinically.
- The patient population most likely to benefit from a treatment may be identified.
- Treatment effects may be estimated with greater precision, which reduces uncertainty about what the better treatment is.
- A definitive conclusion may be reached earlier so that novel effective medicines can be accessed sooner by the wider patient population who did not participate in the trial.

Adaptive trials

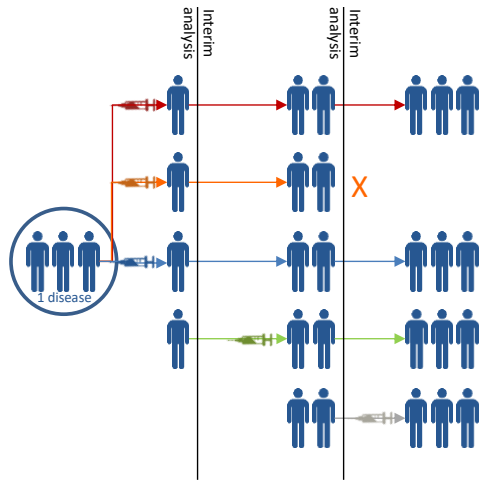
Different designs 1/2

Adaptive design	Definition	Platform trials
Continual reassessment method	A dose escalation Phase I trial that aims to find the maximum tolerated dose (MTD) of a new therapy.	
Group-sequential	adaptive design where the number of patients isn't set in advance. Patients are divided into an equal number of groups and data is analyzed at pre-determined points in the trial. A stopping rule specifies when and why a trial might be halted at these points.	
Sample size re-estimation	The sample size re-estimation (SSR) adaptive design allows interim analyses and resultant modifications of the ongoing trial to preserve or increase power.	
Multi-arm multi-stage	Explore multiple treatments, doses, durations or combinations with options to 'drop losers' or 'select winners' early	
Population enrichment	Narrow down recruitment to patients more likely to benefit (most) from the treatment	
Adaptive randomization	Shift allocation ratio towards more promising or informative treatment(s)	
Adaptive dose-ranging	Shift allocation ratio towards more promising or informative dose(s)	
Adapting formulation		Umbrella trials
Platform trials	Adaptive multi-arm, multistage trial designs that allow for evaluation of multiple interventions using interim evaluations and addition of new interventions during the trial.	
Seamless phase II/III	Combine selection and confirmatory stages into one trial	Basket trials
Umbrella trials	A type of clinical trial that tests subjects who have the same type of disease but different gene mutations or biomarkers.	
Basket trials	A type of clinical trial that tests a single intervention across multiple disease populations defined by disease stage, histology, number of prior therapies, genetic or other biomarkers, or demographic characteristics.	
Population enrichment	The prospective use of any patient characteristic – demographic, pathophysiologic, historical, genetic, and others – to select a study population in which detection of a drug effect is more likely than it would be in an unselected population.	

Adaptive trials

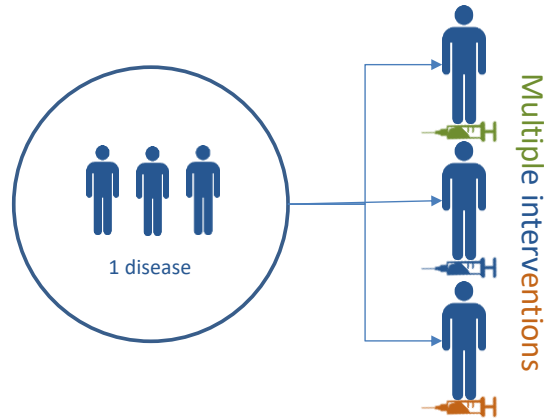
Different designs 2/2

Platform trial



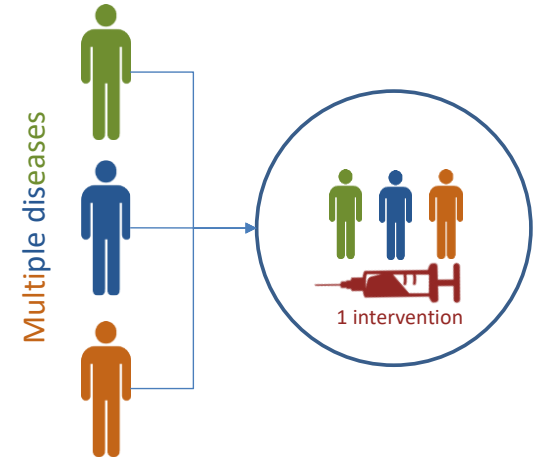
Platform trials are an extension of adaptive multi-arm, multistage trial designs that allow for evaluation of multiple interventions using **interim evaluations and addition of new interventions** during the trial.

Umbrella trial



A type of clinical trial that tests how well new drugs or other substances work in patients who have the same type of cancer but different gene mutations (changes) or biomarkers. In **umbrella trials**, patients receive **treatment based on the specific mutation** or biomarker found in their cancer.

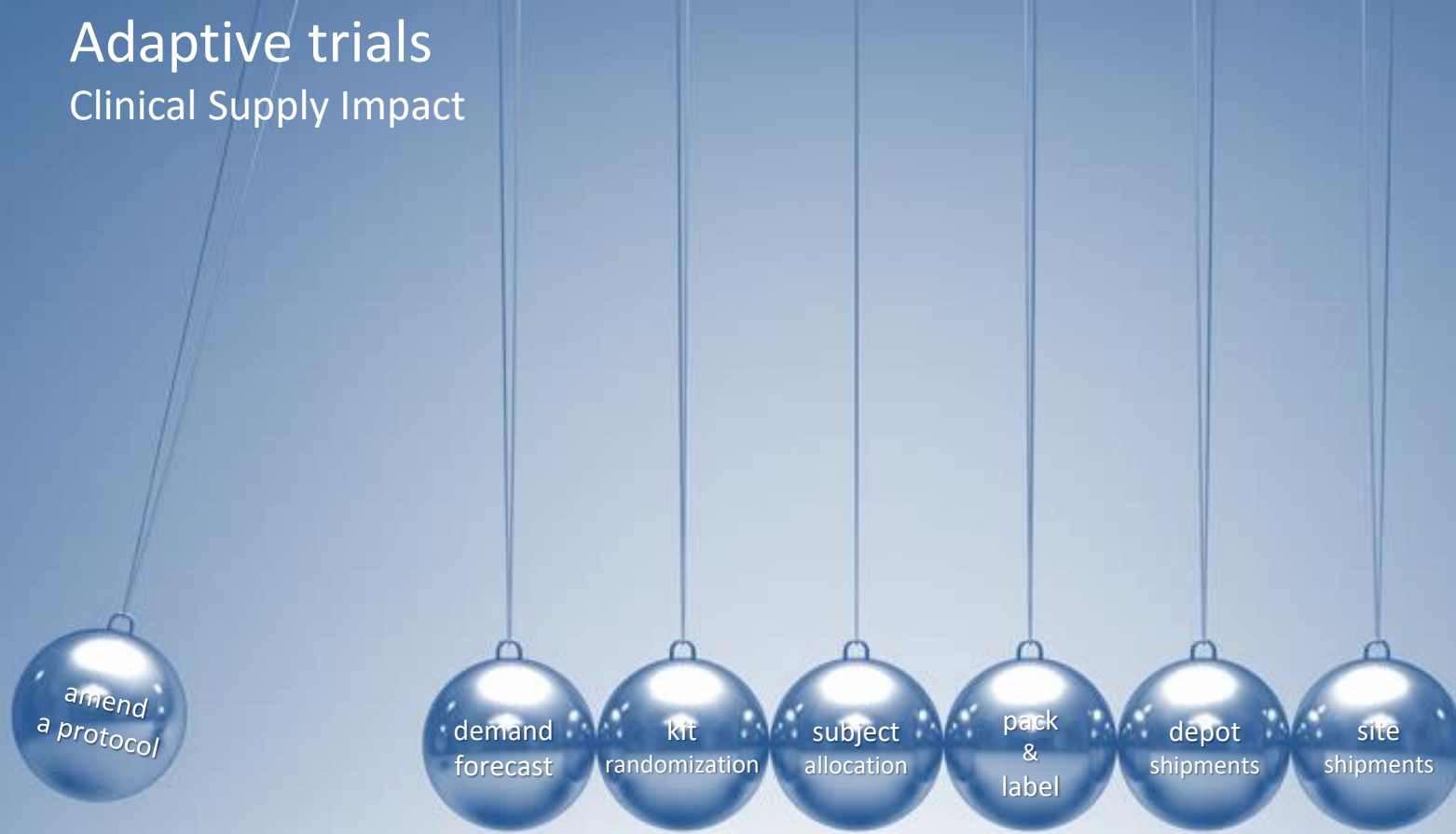
Basket trial



A **Basket Trial** involves a **single** investigational **drug** or drug combination that is studied **across multiple** cancer **populations** defined by disease stage, histology, number of prior therapies, genetic or other biomarkers, or demographic characteristics.

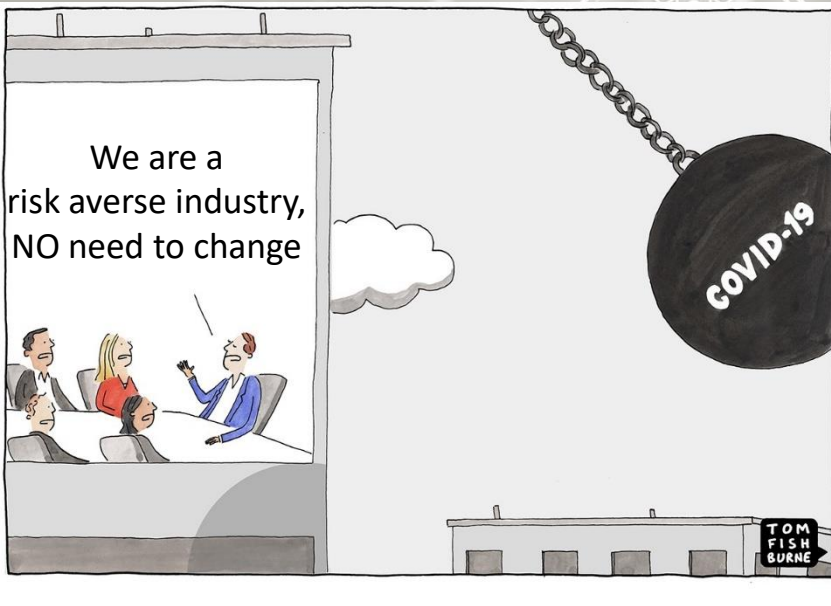
Adaptive trials

Clinical Supply Impact



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Let's shape the future
of life sciences
together!



GUIDANCE ON THE MANAGEMENT OF CLINICAL TRIALS DURING THE COVID-19 (CORONAVIRUS) PANDEMIC

Version 4

04/02/2021