

# THE INTERNATIONAL HUMAN XENOTRANSPLANTATION INVENTORY: CURRENT DATA AND THE NEED FOR ITS INTEGRATION INTO A BROADER REGISTRY

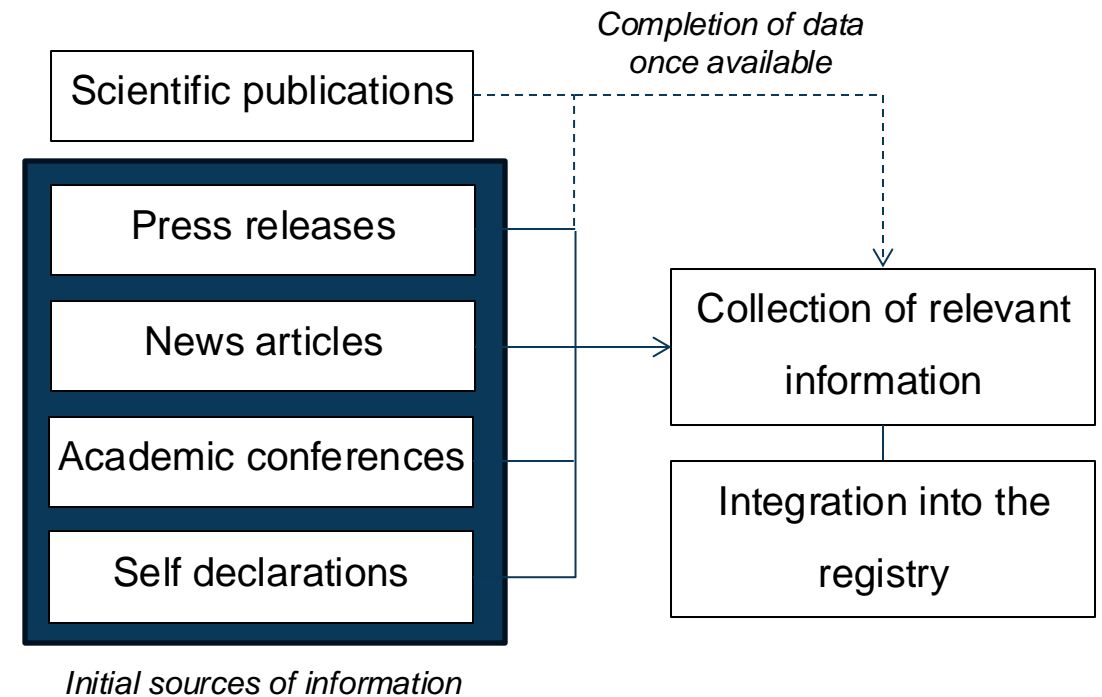
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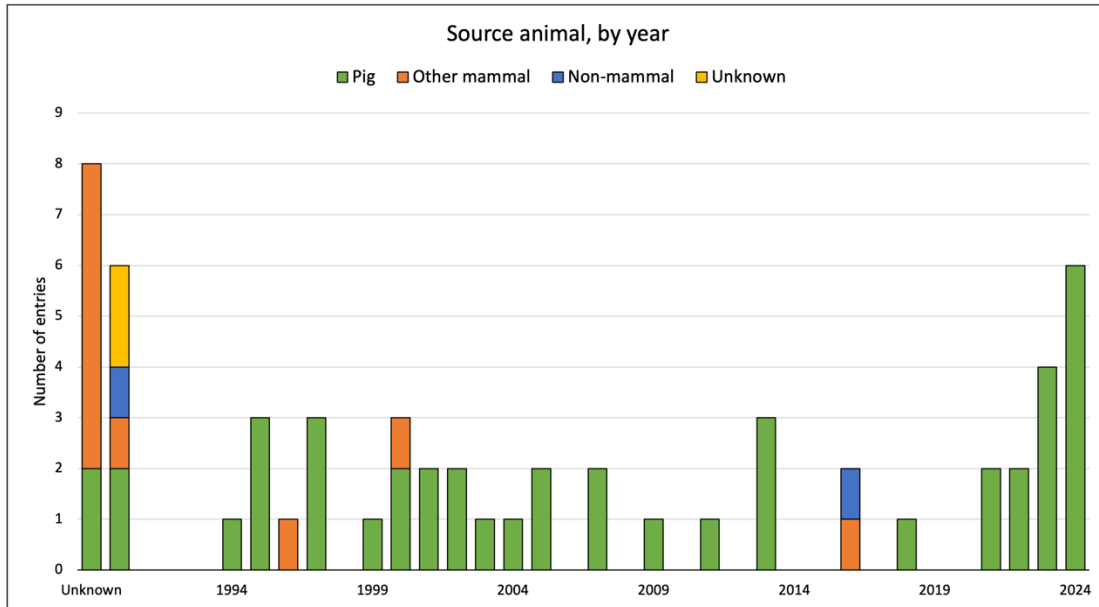
# XENOTRANSPLANTATION AND THE NEED FOR A GLOBAL REGISTRY

- **Main goal:** encourage good practice by improving information access and transparency regarding xenotransplantation (XTP).
- **2005:** to establish guidelines for best practices in XTP, the need for an inventory of human XTP practices was suggested during a consultation led by the World Health Organization.
- **2006:** *humanxenotransplant.org* was created in collaboration with the International Xenotransplantation Association in Geneva, Switzerland.
- **Content of the inventory:** principal investigator and institution, transplanted cell / tissue / organ, source animal, governmental oversight, etc.

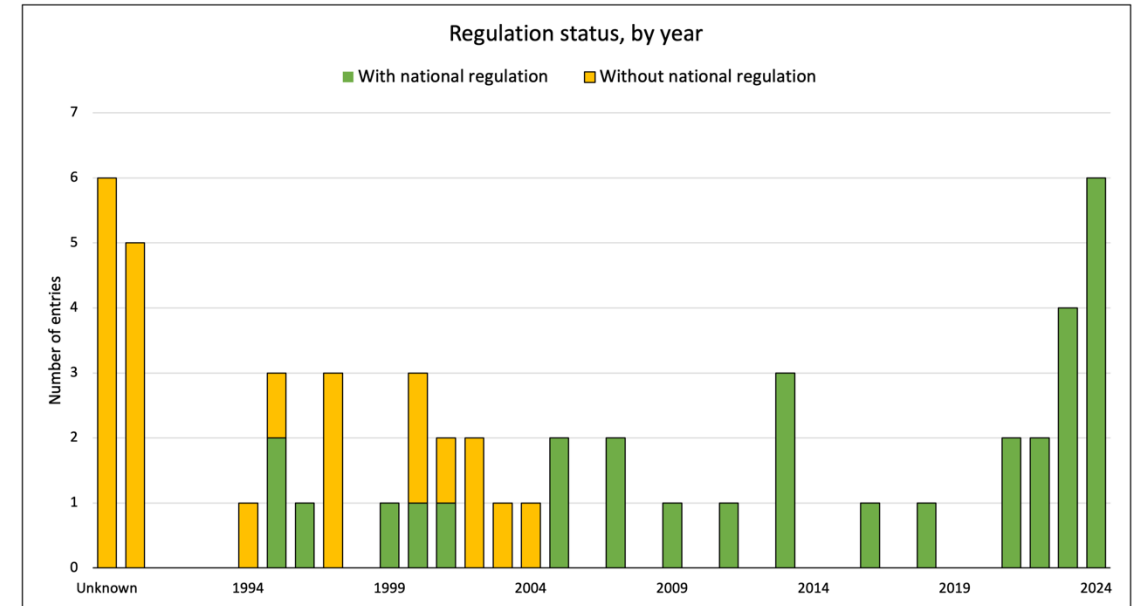


# CURRENT DATA AND TRENDS IN XENOTRANSPLANTATION

- **From 1990 to Sept 2024** : 54 distinct sets of XTp practices/trials on humans (24 cells XTp (50%), 5 tissue XTp (9.3%), 14 organ XTp (25.9%), 8 extracorporeal transfusions (14.8%).

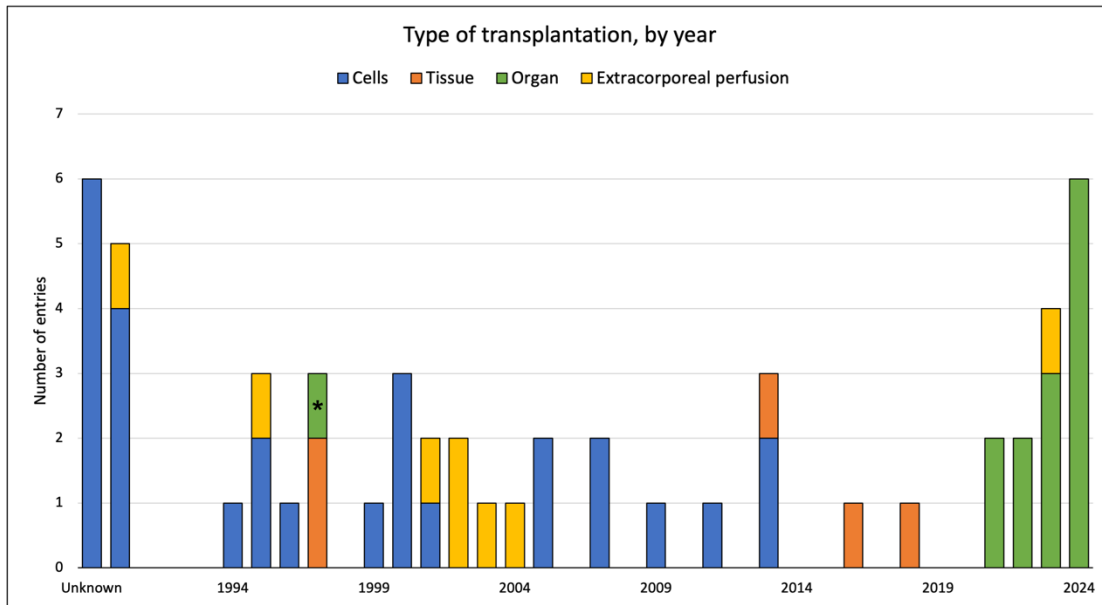


Pig emerging as the most promising source animal for XTp, owing to logistical, technical and ethical advantages over primates and other animals.



Frequent lack of official oversight before 2005 due to absence of related legislation. All documented cases from 2005 onward have been regulated.

# CLINICAL XENOTRANSPLANTATION AND FUTURE OF THE REGISTRY



Shift from many cellular XTP (in blue), notably islets of Langerhans trials, to recent upsurge of solid organ XTP (in green), involving kidneys, hearts and liver, allowed by decades of preclinical testing on non-human primate models.

- The dataset illustrates a resurgence of clinical XTP over the last 3 years, compared to a relative low activity period before (during which many preclinical successes were achieved).
- Even more clinical trials are expected in the near future, notably for end-stage kidney or heart diseases, with growing public attention. Accurate reporting and data access become even more necessary.
- Increasing number of cases could become too burdensome for the current structure of the inventory.

# STRONGER INTERNATIONAL SUPPORT OR INTEGRATION INTO A LARGER REGISTRY

- With expected increasing volume of XTp around the world, the current inventory could benefit from being reinvigorated with stronger international support, or its inclusion into a larger well-prescribed registry.
- The *Global Observatory on Donation and Transplantation* represents the most comprehensive source of worldwide data regarding organ donation and transplantation derived from official sources.
- The *Global Observatory on Donation and Transplantation* could be a candidate for the integration of the current registry.

[humanxenotransplant.org](https://humanxenotransplant.org)

